

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	112	"5512549"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2007/01/27 11:54
S1	5	Hathaway.IN. Baron.IN. Mistry.IN. Roman.IN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2007/01/27 11:53
S2	112	"5512549"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2007/01/26 19:06
S3	2	"20020107206"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2007/01/26 19:06

=> D Hist

(FILE 'HOME' ENTERED AT 15:33:15 ON 24 JAN 2007)

FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE' ENTERED AT 15:33:32 ON 24 JAN 2007  
L1 9302 S EXENDIN OR GLP-1 OR ("GLUCAGON-LIKE AGONIST")  
L2 24309 S "FREE RADICAL SCAVENGER"  
L3 44707 S ISCHEM##### AND EVENT  
L4 158841 S REPERFUSION  
L5 183126 S CARDIAC INTERVENTION OR (ANGIOPLASTY OR "CORONARY BY PASS" OR  
L6 110219 S CARDIAC AND (ISCHEMIA OR REPERFUSION OR "CONGESTIVE HEART FAI  
L7 355 S METABOLIC INTERVENTION  
L8 74695 S ARRHYTHMIA AND (TREAT##### OR PREVENT#####)  
L9 4 S L1 AND L8 AND PD<=20031219  
L10 1 S L1 AND L2 AND PD<=20031219  
L11 0 S L1 AND L3 AND PD<=20031219  
L12 0 S L1 AND L3 AND PD<=20031219  
L13 15 S L1 AND L4 AND PD<=20031219  
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L16 5 S L1 AND L7 AND PD<=20031219  
L17 4 DUP REM L9 (0 DUPLICATES REMOVED)  
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L19 2 DUP REM L14 (0 DUPLICATES REMOVED)  
L20 8 DUP REM L15 (0 DUPLICATES REMOVED)  
L21 4 DUP REM L16 (1 DUPLICATE REMOVED)

=> S Nephropathy OR ("END Stage renal disease") OR ESRD  
L22 139696 NEPHROPATHY OR ("END STAGE RENAL DISEASE") OR ESRD

=> S Endothelial Function  
L23 22772 ENDOTHELIAL FUNCTION

=> S ProteinUria  
L24 82699 PROTEINURIA

=> S Glomerulosclerosis  
L25 21397 GLOMERULOSCLEROSIS

=> s Diabetes OR "Insulin resistance" OR hypertension  
L26 1521989 DIABETES OR "INSULIN RESISTANCE" OR HYPERTENSION

=> S L1 AND L22 AND PD<=20031219

L17 4 DUP REM L9 (0 DUPLICATES REMOVED)  
L18 8 DUP REM L13 (7 DUPLICATES REMOVED)  
L19 2 DUP REM L14 (0 DUPLICATES REMOVED)  
L20 8 DUP REM L15 (0 DUPLICATES REMOVED)  
L21 4 DUP REM L16 (1 DUPLICATE REMOVED)  
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L23 22772 S ENDOTHELIAL FUNCTION  
L24 82699 S PROTEINURIA  
L25 21397 S GLOMERULOSCLEROSIS  
L26 1521989 S DIABETES OR "INSULIN RESISTANCE" OR HYPERTENSION  
L27 14 S L1 AND L22 AND PD<=20031219  
L28 1 S L1 AND L23 AND PD<=20031219  
L29 1 S L1 AND L24 AND PD<=20031219  
L30 1 S L1 AND L25 AND PD<=20031219  
L31 1792 S L1 AND L26 AND PD<=20031219  
L32 13 S L31 AND L22

=> D Rem 127

'REM' IS NOT A VALID FORMAT

In a multifile environment, a format can only be used if it is valid in at least one of the files. Refer to file specific help messages or the STNGUIDE file for information on formats available in individual files.

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REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT):Exit  
'EXIT' IS NOT A VALID FORMAT

In a multifile environment, a format can only be used if it is valid in at least one of the files. Refer to file specific help messages or the STNGUIDE file for information on formats available in individual files.

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'DUP' IS NOT A VALID FORMAT

'REM' IS NOT A VALID FORMAT

'L115' IS NOT A VALID FORMAT

In a multifile environment, a format can only be used if it is valid in at least one of the files. Refer to file specific help messages or the STNGUIDE file for information on formats available in individual files.

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=> S L1 AND L23 AND PD<=20031219

3 FILES SEARCHED...

L28 1 L1 AND L23 AND PD<=20031219

=> S L1 AND L24 AND PD<=20031219

3 FILES SEARCHED...

L29 1 L1 AND L24 AND PD<=20031219

=> S L1 AND L25 AND PD<=20031219

3 FILES SEARCHED...

L30 1 L1 AND L25 AND PD<=20031219

=> S L1 AND L26 AND PD<=20031219

3 FILES SEARCHED...

L31 1792 L1 AND L26 AND PD<=20031219

=> S L31 AND L22

L32 13 L31 AND L22

=> D Hist

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L14 2 S L1 AND L5 AND PD<=20031219  
L15 8 S L1 AND L6 AND PD<=20031219  
L16 5 S L1 AND L7 AND PD<=20031219

L27 ANSWER 1 OF 14 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 2003:390202 BIOSIS <<LOGINID::20070124>>

DOCUMENT NUMBER: PREV200300390202

TITLE: The glucagon-like peptides: A double-edged therapeutic sword?

AUTHOR(S): Perry, TracyAnn [Reprint Author]; Greig, Nigel H.  
CORPORATE SOURCE: Section of Drug Design and Development, Laboratory of Neurosciences, Gerontology Research Center, National Institute on Aging, National Institutes of Health, 5600 Nathan Shock Drive, Baltimore, MD, 21224, USA  
perryt@grc.nia.nih.gov

SOURCE: Trends in Pharmacological Sciences, (July 2003)  
Vol. 24, No. 7, pp. 377-383. print.  
ISSN: 0165-6147 (ISSN print).

DOCUMENT TYPE: Article  
General Review; (Literature Review)

LANGUAGE: English

ENTRY DATE: Entered STN: 27 Aug 2003

Last Updated on STN: 27 Aug 2003

=> Dup Rem 127

PROCESSING COMPLETED FOR L27

L33 9 DUP REM L27 (5 DUPLICATES REMOVED)

=> Dup Rem 132

PROCESSING COMPLETED FOR L32

L34 9 DUP REM L32 (4 DUPLICATES REMOVED)

=> D Ibib All L28

L28 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:447519 CAPLUS <<LOGINID::20070124>>

DOCUMENT NUMBER: 139:255595

TITLE: Antihypertensive effect of glucagon-like peptide 1 in Dahl salt-sensitive rats

AUTHOR(S): Yu, Ming; Moreno, Carol; Hoagland, Kimberly M.; Dahly, Annette; Ditter, Katie; Mistry, Mahesh; Roman, Richard J.

CORPORATE SOURCE: Department of Physiology, Medical College of Wisconsin, Milwaukee, WI, 53226, USA

SOURCE: Journal of Hypertension (2003), 21(6),

1125-1135

CODEN: JOHYD3; ISSN: 0263-6352

PUBLISHER: Lippincott Williams & Wilkins

DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AN 2003:447519 CAPLUS <<LOGINID::20070124>>  
 DN 139:255595  
 ED Entered STN: 11 Jun 2003  
 TI Antihypertensive effect of glucagon-like peptide I in Dahl salt-sensitive rats  
 AU Yu, Ming; Moreno, Carol; Hoagland, Kimberly M.; Dahly, Annette; Ditter, Katie; Mistry, Mahesh; Roman, Richard J.  
 CS Department of Physiology, Medical College of Wisconsin, Milwaukee, WI, 53226, USA  
 SO Journal of Hypertension (2003), 21(6), 1125-1135  
 CODEN: JOHYD3; ISSN: 0263-6352  
 PB Lippincott Williams & Wilkins  
 DT Journal  
 LA English  
 CC 2-6 (Mammalian Hormones)  
 AB Dahl salt-sensitive (Dahl S) rats exhibit many phenotypic traits associated with salt-sensitive hypertension in man. Specifically, they are salt-sensitive, insulin-resistant and hyperlipidemic. They also develop endothelial dysfunction, cardiac injury and glomerulosclerosis. Insulin resistance is linked to hypertension, renal and cardiac damage and endothelial dysfunction. Thus, an agent that has diuretic action and can improve insulin resistance, like recombinant glucagon-like peptide-1 (7-36)amide (rGLP-1), may have an antihypertensive effect. To determine whether chronic administration of rGLP-1 attenuates the development of hypertension, endothelial dysfunction and/or hypertension-induced renal and cardiac end organ damage in Dahl S rats. Mean arterial pressure (MAP) and urinary excretion of protein and albumin were measured in Dahl S rats before and after they were fed a 8% NaCl diet and infused with rGLP-1 (1 mg/kg per min, i.v.) or vehicle for 14 days. At the end of the study, the degree of renal and cardiac injury was histol. assessed and endothelium-dependent relaxing function was studied using aortic rings. In other rats, the effects of rGLP-1 on sodium and water balance and plasma glucose and insulin levels for the first 3 days following a step change in sodium intake from a 0.1% NaCl diet to 7.5 mEq/day were determined. The rGLP-1 significantly attenuated the development of hypertension in Dahl S rats (136 vs. 174 mmHg). This was associated with reduction in proteinuria (46 vs. 128 mg/day) and albuminuria (46 vs. 86 mg/day) and improvement of endothelial function and renal and cardiac damage. The rGLP-1 markedly increased urine flow and sodium excretion for the first 3 days following elevation in sodium intake. It had no significant effects on plasma glucose and insulin concns. The rGLP-1 has antihypertensive and cardiac and renoprotective effects in Dahl S rats fed a high salt diet. The antihypertensive effect of rGLP-1 in Dahl S rats is due mainly to its diuretic and natriuretic effects, rather

studies  
 RL: BSU (Biological study, unclassified); BIOL (Biological study) (GLP-1 effect on water and sodium excretion in Dahl salt-sensitive hypertensive rats)  
 IT 89750-14-1, Glucagon-like peptide I 118549-37-4, Insulinotropin  
 RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (antihypertensive effect of glucagon-like peptide I in Dahl salt-sensitive rats)  
 RE.CNT 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 RE  
 (1) Anderson, S; J Clin Invest 1985, V76, P612 CAPLUS  
 (2) Barragan, J; Am J Physiol 1994, V266, PE459 CAPLUS  
 (3) Bishop, J; Cardiovasc Res 2000, V47, P57 CAPLUS  
 (4) Bullock, B; Endocrinology 1996, V137, P2968 CAPLUS  
 (5) Campese, V; Hypertension 1994, V23, P531 MEDLINE  
 (6) Dall'Aglia, E; Am J Hypertens 1991, V4, P773 CAPLUS  
 (7) DeFronzo, R; Diabetologia 1981, V21, P165 CAPLUS  
 (8) DeFronzo, R; J Clin Invest 1976, V58, P83 CAPLUS  
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 (11) Ferrannini, E; N Engl J Med 1987, V317, P350 MEDLINE  
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 (14) Hayakawa, H; Circulation 1997, V96, P2407 CAPLUS  
 (15) Ito, O; Hypertension 1999, V33, P419 CAPLUS  
 (16) Katakam, P; Am J Physiol 1998, V275, PR788 CAPLUS  
 (17) Kim, S; Br J Pharm 1996, V118, P549 CAPLUS  
 (18) Kotchen, T; Am J Hypertens 1997, V10, P1020 CAPLUS  
 (19) Kotchen, T; Am J Physiol 1991, V261, PE692 CAPLUS  
 (20) Miller, A; J Cardiovasc Pharm Ther 1998, V3, P125 CAPLUS  
 (21) Minireview, D; Endocrinology 2001, V142, P521  
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 (27) O'Bryan, G; Semin Nephrol 1997, V17, P93 CAPLUS  
 (28) Parving, H; Lancet 1983, V1, P1175 MEDLINE  
 (29) Raji, L; Am J Med 1985, V79, P37 CAPLUS  
 (30) Rapp, J; Hypertension 1982, V4, P753 MEDLINE  
 (31) Reaven, G; Hypertension 1991, V18, P630 CAPLUS  
 (32) Ritz, E; J Intern Med 1999, V245, P111 MEDLINE  
 (33) Roman, R; Am J Hypertens 1997, V10, P635 CAPLUS  
 (34) Sakamoto, S; Diabetes 1998, V47, P82 CAPLUS

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 ST hypertension GLP I; sodium water excretion hypertension GLP I; glucose insulin blood hypertension GLP I; aorta heart kidney damage hypertension GLP I; albuminuria proteinuria hypertension GLP I; antihypertensive GLP I diuresis natriuresis  
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 IT Heart, disease  
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 IT Blood pressure  
 Heart rate  
 (GLP-1 effect on blood pressure and heart rate in Dahl salt-sensitive hypertensive rats)  
 IT Albumins, biological studies  
 RL: BSU (Biological study, unclassified); BIOL (Biological study) (albuminuria; GLP-1 effect on albuminuria and proteinuria in Dahl salt-sensitive hypertensive rats)  
 IT Antihypertensives  
 (antihypertensive action of GLP-1 in Dahl salt-sensitive hypertensive rats is due to diuretic and natriuretic actions)  
 IT Artery, disease  
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 IT Injury  
 (aortic endothelial; GLP-1 effect on aorta endothelium and heart and kidney damage in Dahl salt-sensitive hypertensive rats)  
 IT Endothelium  
 (aortic, disease, injury; GLP-1 effect on aorta endothelium and heart and kidney damage in Dahl salt-sensitive hypertensive rats)  
 IT Proteins  
 RL: BSU (Biological study, unclassified); BIOL (Biological study) (proteinuria; GLP-1 effect on albuminuria and proteinuria in Dahl salt-sensitive hypertensive rats)  
 IT 50-99-7, Glucose, biological studies 9004-10-8, Insulin, biological studies  
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 IT 7440-23-5, Sodium, biological studies 7732-18-5, Water, biological

(35) Salonen, J; Diabetes 1998, V47, P270 CAPLUS  
 (36) Shimabukuro, M; Metabolism 1996, V45, P1168 CAPLUS  
 (37) Sterzel, R; Kidney Int 1988, V33, P1119 MEDLINE  
 (38) Tierney, W; Am J Kidney Dis 1989, V13, P485 MEDLINE  
 (39) Tobian, L; Hypertension 1979, V1, P316 CAPLUS  
 (40) Toft-Nielsen, M; Diabetes Care 1999, V22, P1137 MEDLINE  
 (41) Vella, A; Diabetes 2000, V49, P611 CAPLUS  
 (42) Yagi, K; Hypertension 1997, V29, P728 CAPLUS  
 (43) Yamamoto, H; J Clin Invest 2002, V110, P43 CAPLUS  
 (44) Zou, A; Hypertension 1996, V27, P631 CAPLUS

=> D Ibib ALL I28

L28 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2003:447519 CAPLUS <<LOGINID::20070124>>  
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 TITLE: Antihypertensive effect of glucagon-like peptide I in Dahl salt-sensitive rats  
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(Dahl salt-sensitive; antihypertensive effect of glucagon-like peptide 1 in Dahl salt-sensitive rats)

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IT Albumins, biological studies  
RL: BSU (Biological study, unclassified); BIOL (Biological study)

(albuminuria; GLP-1 effect on albuminuria and proteinuria in Dahl salt-sensitive hypertensive rats)

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(28) Parving, H; Lancet 1983, V1, P1175 MEDLINE  
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(44) Zou, A; Hypertension 1996, V27, P631 CAPLUS

=> D fbib all 129

L29 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN  
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DOCUMENT NUMBER: 139:255595  
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ED Entered STN: 11 Jun 2003  
TI Antihypertensive effect of glucagon-like peptide 1 in Dahl salt-sensitive rats  
AU Yu, Ming; Moreno, Carol; Hoagland, Kimberly M.; Dahly, Annette; Ditter, Katie; Mistry, Mahesh; Roman, Richard J.  
CS Department of Physiology, Medical College of Wisconsin, Milwaukee, WI, 53226, USA  
SO Journal of Hypertension (2003), 21(6), 1125-1135  
CODEN: JOHYD3; ISSN: 0263-6352  
PB Lippincott Williams & Wilkins  
DT Journal  
LA English  
CC 2-6 (Mammalian Hormones)  
AB Dahl salt-sensitive (Dahl S) rats exhibit many phenotypic traits associated with salt-sensitive hypertension in man. Specifically, they are salt-sensitive, insulin-resistant and hyperlipidemic. They also develop endothelial dysfunction, cardiac injury and glomerulosclerosis. Insulin resistance is linked to hypertension, renal and cardiac damage and endothelial dysfunction. Thus, an agent that has diuretic action and can improve insulin resistance, like recombinant glucagon-like peptide-1(7-36)amide (rGLP-1), may have an antihypertensive effect. To determine whether chronic administration of rGLP-1 attenuates the development of hypertension, endothelial dysfunction and/or hypertension-induced renal and cardiac end organ damage in Dahl S rats. Mean arterial pressure (MAP) and urinary excretion of protein and albumin were measured in Dahl S rats before and after they were fed a 8% NaCl diet and infused with rGLP-1 (1 mg/kg per min, i.v.) or vehicle for 14 days. At the end of the study, the degree of renal and cardiac injury was histol. assessed and endothelium-dependent relaxing function was studied using aortic rings. In other rats, the effects of rGLP-1 on sodium and water balance and plasma glucose and insulin levels for the first 3 days following a step change in sodium intake from a 0.1% NaCl diet to 7.5 mEq/day were determined

The rGLP-1 significantly attenuated the development of hypertension in Dahl S rats (136 vs. 174 mmHg). This was associated with reduction in proteinuria (46 vs. 128 mg/day) and albuminuria (46 vs. 86 mg/day) and improvement of endothelial function and renal and cardiac damage. The rGLP-1 markedly increased urine flow and sodium excretion for the first 3 days following elevation in sodium intake. It had no significant effects on plasma glucose and insulin concns. The rGLP-1 has antihypertensive and cardiac and renoprotective effects in Dahl S rats fed a high salt diet. The antihypertensive effect of rGLP-1 in Dahl S rats is due mainly to its diuretic and natriuretic effects, rather than an effect to improve insulin-resistance.

ST hypertension GLP1; sodium water excretion hypertension GLP1; glucose insulin blood hypertension GLP1; aorta heart kidney damage hypertension GLP1; albuminuria proteinuria hypertension GLP1; antihypertensive GLP1 diuresis natriuresis

IT Hypertension  
(Dahl salt-sensitive; antihypertensive effect of glucagon-like peptide 1 in Dahl salt-sensitive rats)

IT Heart, disease

Kidney, disease

(GLP-1 effect on aorta endothelium and heart and kidney damage in Dahl salt-sensitive hypertensive rats)

IT Blood pressure

Heart rate

(GLP-1 effect on blood pressure and heart rate in Dahl salt-sensitive hypertensive rats)

IT Albumins, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study) (albuminuria; GLP-1 effect on albuminuria and proteinuria in Dahl salt-sensitive hypertensive rats)

IT Antihypertensives

(antihypertensive action of GLP-1 in Dahl salt-sensitive hypertensive rats is due to diuretic and natriuretic actions)

IT Artery, disease

(aortic endothelial injury; GLP-1 effect on aorta endothelium and heart and kidney damage in Dahl salt-sensitive hypertensive rats)

IT Injury

(aortic endothelial; GLP-1 effect on aorta endothelium and heart and kidney damage in Dahl salt-sensitive hypertensive rats)

IT Endothelium

(aortic, disease, injury; GLP-1 effect on aorta endothelium and heart and kidney damage in Dahl salt-sensitive hypertensive rats)

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L30 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2003:447519 CAPLUS <<LOGINID::20070124>>  
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TITLE: Antihypertensive effect of glucagon-like peptide 1 in Dahl salt-sensitive rats

AUTHOR(S): Yu, Ming; Moreno, Carol; Hoagland, Kimberly M.; Dahly, Annette; Ditter, Katie; Mistry, Mahesh; Roman, Richard J.

CORPORATE SOURCE: Department of Physiology, Medical College of Wisconsin, Milwaukee, WI, 53226, USA

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IT Proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study) (proteinuria; GLP-1 effect on albuminuria and proteinuria in Dahl salt-sensitive hypertensive rats)

IT 50-99-7, Glucose, biological studies 9004-10-8, Insulin, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study) (GLP-1 effect on blood glucose and insulin in Dahl salt-sensitive hypertensive rats)

IT 7440-23-5, Sodium, biological studies 7732-18-5, Water, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study) (GLP-1 effect on water and sodium excretion in Dahl salt-sensitive hypertensive rats)

IT 89750-14-1, Glucagon-like peptide 1 118549-37-4, Insulinotropin  
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(antihypertensive effect of glucagon-like peptide 1 in Dahl salt-sensitive rats)

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L33 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2004:533962 CAPLUS <<LOGINID::20070124>>  
DOCUMENT NUMBER: 141:82335

TITLE: Human glucagon-like-peptide-1 mimics and their antidiabetic effects

INVENTOR(S): Natarajan, Sessa Iyer; Mapelli, Claudio; Bastos, Margarita M.; Bernatowicz, Michael; Lee, Ving; Ewing, William R.

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 73 pp., Cont-in-part of U.S. Ser. No. 273,975.

CODEN: USXXCO

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US 2004127423	A1	20040701	US 2003-419399	20030421
US 2003195157	A1	20031016	US 2002-273975	20021018 <-
WO 2004094461	A2	20041104	WO 2004-US12374	20040421
WO 2004094461	A3	20050915		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, GU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1615653 A2 20060118 EP 2004-760098 20040421  
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FL, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR

PRIORITY APPLN. INFO: US 2001-342015 P 20011018

US 2002-273975 A2 20021018

US 2003-419399 A 20030421

WO 2004-US12374 W 20040421

AN 2004:533962 CAPLUS <<LOGINID::20070124>>

DN 141:82335

ED Entered STN: 02 Jul 2004

TI Human glucagon-like-peptide-1 mimics and their antidiabetic effects

IN Natarajan, Sessa Iyer; Mapelli, Claudio; Bastos, Margarita M.;

Bernatowicz, Michael; Lee, Ving; Ewing, William R.  
PA USA  
SO U.S. Pat. Appl. Publ., 73 pp., Cont.-in-part of U.S. Ser. No. 273,975.  
CODEN: USXXCO  
DT Patent  
LA English  
IC ICM A61K038-10  
ICS C07K007-08  
INCL 514015000; 530328000  
CC 1-10 (Pharmacology)  
Section cross-reference(s): 2, 34, 63

FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI US 2004127423	A1	20040701	US 2003-419399	20030421
US 2003195157	A1	20031016	US 2002-273975	20021018 <--
WO 2004094461	A2	20041104	WO 2004-US12374	20040421
WO 2004094461	A3	20050915		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1615653 A2 20060118 EP 2004-760098 20040421

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR

PRAI US 2001-342015P P 20011018

US 2002-273975 A2 20021018

US 2003-419399 A 20030421

WO 2004-US12374 W 20040421

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

US 2004127423 ICM A61K038-10  
ICS C07K007-08  
INCL 514015000; 530328000  
IPC1 A61K0038-10 [ICM,7]; C07K0007-08 [ICS,7]; C07K0007-00 [ICS,7,C\*]  
IPCR A61K0038-00 [N,C\*]; A61K0038-00 [N,A]; C07K0014-435 [I,C\*]; C07K0014-605 [I,A]

(MTP (microsomal triglyceride-exchanging protein), inhibitors; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Antiartherosclerotics  
(antiatherosclerotics; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Drug delivery systems  
(capsules; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Proteins  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(cholesterol ester-exchanging; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Kidney, disease  
(diabetic nephropathy; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Nerve, disease  
(diabetic neuropathy; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Eye, disease  
(diabetic retinopathy; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Transport proteins  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(dopamine transporter; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT 5-HT reuptake inhibitors  
Antihypertensives  
Antiobesity agents  
Appetite depressants  
Atherosclerosis  
Diabetes mellitus  
Human  
Hyperglycemia  
Hypertension  
Hypertriglyceridemia  
Hypolipemic agents  
Obesity  
Signal transduction, biological  
Wound healing  
b3-Adrenoceptor agonists  
(human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Fatty acids, biological studies  
Glucagon-like peptide-1 receptors  
Hyperlipidemia  
Thyroid hormone receptors  
RL: BSU (Biological study, unclassified); BIOL (Biological study)

NCL 514/015.000; 530/328.000  
ECLA C07K014/605  
US 2003195157 IPC1 A61K0038-10 [ICM,7]; A61K0038-08 [ICS,7]; C07K0007-08 [ICS,7]; C07K0007-06 [ICS,7]; C07K0007-00 [ICS,7,C\*]  
IPCR A61K0038-00 [N,C\*]; A61K0038-00 [N,A]; C07K0014-435 [I,C\*]; C07K0014-605 [I,A]  
NCL 514/016.000; 514/017.000; 530/328.000; 530/329.000  
ECLA C07K014/605  
WO 2004094461 IPC1 C07K [ICM,7]  
IPCR A61K0038-00 [I,C\*]; A61K0038-00 [I,A]; A61K0038-02 [I,C\*]; A61K0038-02 [I,A]; A61K0038-08 [I,C\*]; A61K0038-08 [I,A]; A61K0038-10 [I,C\*]; A61K0038-10 [I,A]; C07K [I,S]; C07K0007-00 [I,C\*]; C07K0007-02 [I,A]; C07K0007-04 [I,A]; C07K0007-08 [I,A]  
EP 1615653 IPC1 A61K0038-00 [ICM,7]; A61K0038-02 [ICS,7]; A61K0038-10 [ICS,7]; A61K0038-08 [ICS,7]; C07K0007-02 [ICS,7]; C07K0007-04 [ICS,7]; C07K0007-08 [ICS,7]; C07K0007-00 [ICS,7,C\*]  
IPCR A61K0038-00 [I,C\*]; A61K0038-00 [I,A]; A61K0038-02 [I,C\*]; A61K0038-02 [I,A]; A61K0038-08 [I,C\*]; A61K0038-08 [I,A]; A61K0038-10 [I,C\*]; A61K0038-10 [I,A]; C07K [I,S]; C07K0007-00 [I,C\*]; C07K0007-02 [I,A]; C07K0007-04 [I,A]; C07K0007-08 [I,A]

AB The invention discloses human glucagon-like peptide-1 (GLP-1) peptide mimics that mimic the biol. activity of the native GLP-1 peptide and thus are useful for the treatment or prevention of diseases or disorders associated with GLP activity. Further, the invention provides novel, chemical modified peptides that not only stimulate insulin secretion in type II diabetics, but also produce other beneficial insulinotropic responses. These synthetic peptide GLP-1 mimics exhibit increased stability to proteolytic cleavage making them ideal therapeutic candidates for oral or parenteral administration.

ST human glucagon peptide mimic prepn diabetes antidiabetic insulin stability

IT Proteins

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(ALBP (adipocyte lipid-binding protein); human glucagon-like-peptide-1 mimics and their antidiabetic effects)

IT Lipoprotein receptors

RL: BSU (Biological study, unclassified); BIOL (Biological study) (LDL; human glucagon-like-peptide-1 mimics and their antidiabetic effects)

IT Proteins

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Peptides, biological studies  
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Sulfonylureas  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Drug delivery systems  
(injections; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Metabolic disorders  
(metabolic syndrome X; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Drug delivery systems  
(microparticles; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Diabetes mellitus  
(non-insulin-dependent; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Antidiabetic agents  
Drug delivery systems  
(oral; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Drug delivery systems  
(suspensions; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Drug delivery systems  
(tablets; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Peroxisome proliferator-activated receptors  
RL: BSU (Biological study, unclassified); BIOL (Biological study) (a; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Peroxisome proliferator-activated receptors  
RL: BSU (Biological study, unclassified); BIOL (Biological study) (g; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT 51-61-6, Dopamine, biological studies 56-81-5, Glycerol, biological studies 9001-62-1, Lipase 9028-35-7, 3-Hydroxy-3-methylglutaryl CoA reductase 9029-60-1, Lipoxigenase 9033-06-1, Glucosidase 9077-14-9, Squalene synthetase 63551-74-6, Lipoxigenase 90002-36-1, 2-Ethylphenyl boronic acid  
RL: BSU (Biological study, unclassified); BIOL (Biological study)

(human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT 516514-32-2P 516514-38-8P 516514-43-5P 516514-47-9P 516514-52-6P  
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516521-42-9P 516521-43-0P 516521-44-1P 516521-45-2P 516521-53-2P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT 9027-63-8, ACAT  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(inhibitors; human glucagon-like-peptide-1 mimics and their  
antidiabetic effects)  
IT 54249-88-6, Dipeptidyl peptidase IV  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)  
(inhibitors; human glucagon-like-peptide-1 mimics and their  
antidiabetic effects)  
IT 9004-10-8, Insulin, biological studies  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(resistance, hyperinsulinemia; human glucagon-like-peptide-1 mimics and  
their antidiabetic effects)

L33 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2004:157498 CAPLUS <<LOGINID::20070124>>  
DOCUMENT NUMBER: 140:199313  
TITLE: Preparation of fused pyrrolylcarboxamides as glycogen  
phosphorylase inhibitors  
INVENTOR(S): Daisy, Joe  
PATENT ASSIGNEE(S): Pfizer Products Inc., USA  
SOURCE: Eur. Pat. Appl., 71 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1391460	A1	20040225	EP 2003-20676	20000918
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
EP 1088824	A2	20010404	EP 2000-308131	20000918 <--
EP 1088824	A3	20010627		
EP 1088824	B1	20040107		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 2002183369	A1	20021205	US 2002-117370	20020405 <--
US 6576653	B2	20030610		
US 2003195361	A1	20031016	US 2003-367002	20030214 <--
US 6828343	B2	20041207		

PRIORITY APPLN. INFO.: US 1999-157148P P 19990930  
EP 2000-308131 A3 20000918

516521-54-3P 516521-55-4P 713497-71-3P 713497-72-4P 713497-73-5P  
713497-74-6P 713497-75-7P 713497-77-9P  
RL: PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic  
preparation); THU (Therapeutic use); BIOL (Biological study); PREP  
(Preparation); USES (Uses)  
(human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT 713497-79-1P 713497-81-5P 713497-83-7P 713497-85-9P  
RL: PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic  
preparation); THU (Therapeutic use); BIOL (Biological study); PREP  
(Preparation); USES (Uses)  
(human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT 51-64-9, Dexamphet-amine 56-03-1, Biguanide 94-20-2, Chlorpropamide  
122-09-8, Phentermine 637-07-0, Clofibrate 657-24-9, Metformin  
943-45-3D, Fibrac acid, derivs. 10238-21-8, Glyburide 14838-15-4,  
Phenylpropanolamine 21187-98-4, Glipizide 22322-71-9, Mazindol  
25812-30-0, Gemfibrozil 29094-61-9, Glipizide 49562-28-9, Fenofibrate  
54870-28-9, Meglitinide 56180-94-0, Acarbose 72432-03-2, Miglitol  
75330-75-5, Lovastatin 79902-63-9, Simvastatin 81093-37-0, Pravastatin  
89750-14-1, Glucagon-like peptide I 93479-97-1, Glimepiride  
93957-54-1, Fluvastatin 96829-58-2, Orlistat 97240-79-4, Topiramate  
97322-87-7, Troglitazone 105816-04-4, Nateglinide 106650-56-0,  
Sibutramine 111025-46-8, Pioglitazone 122320-73-4, Rosiglitazone  
134523-00-5, Atorvastatin 135062-02-1, Repaglinide 141750-63-2,  
Nisvastatin 141758-74-9, AC2993 144288-97-1, TS-962 145599-86-6,  
Cerivastatin 152755-31-2, LY295427 159183-92-3, L750355 161600-01-7,  
Isaglitazone 166518-60-1, Avasimibe 170861-63-9, JTT-501  
176435-10-2, LY315902 178759-95-0, MD 700 196808-45-4 199113-98-9,  
NN-2344 199914-96-0, YM-440 213252-19-8, KRP297 244081-42-3, AJ9677  
258345-41-4, GW-409544 262352-17-0, CP 529414 282526-98-1, ATL-962  
287714-41-4 335149-08-1, L895645 335149-14-9, R-119702 335149-15-0,  
KAD1129 335149-17-2, AR-HO39242 335149-23-0, NVP-DPP-728A  
335149-25-2, CP331648 430433-17-3, Glipryide 444069-80-1, Axokine  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)  
(human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT 150-46-9, Triethylborate 358-23-6, Triflic anhydride 1973-22-4,  
1-Bromo-2-ethylbenzene 4326-36-7 16419-60-6, O-Tolylboronic acid  
82911-69-1 93267-04-0 516521-49-6 713497-86-0  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT 112766-18-4P 516521-46-3P 516521-47-4P 516521-48-5P 516521-50-9P  
516521-51-0P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT 713497-87-1P 713497-88-2P

US 2000-670759 A3 20000927  
US 2002-117370 A3 20020405  
OTHER SOURCE(S): MARPAT 140:199313  
AN 2004:157498 CAPLUS <<LOGINID::20070124>>  
DN 140:199313  
ED Entered STN: 26 Feb 2004  
TI Preparation of fused pyrrolylcarboxamides as glycogen phosphorylase  
inhibitors  
IN Daisy, Joe  
PA Pfizer Products Inc., USA  
SO Eur. Pat. Appl., 71 pp.  
CODEN: EPXXDW  
DT Patent  
LA English  
IC ICM C07D495-04  
ICS C07D491-04; C07D209-52; A61K031-407; A61P003-10; A61P009-10;  
C07D495-14; C07D333-00; C07D209-00; C07D307-00  
CC 28-2 (Heterocyclic Compounds (More Than One Hetero Atom))  
Section cross-reference(s): 1, 63  
FAN.CENT 2  
PATENT NO. KIND DATE APPLICATION NO. DATE  
PI EP 1391460 A1 20040225 EP 2003-20676 20000918  
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, FI, CY  
EP 1088824 A2 20010404 EP 2000-308131 20000918 <--  
EP 1088824 A3 20010627  
EP 1088824 B1 20040107  
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, LT, LV, FI, RO  
US 2002183369 A1 20021205 US 2002-117370 20020405 <--  
US 6576653 B2 20030610  
US 2003195361 A1 20031016 US 2003-367002 20030214 <--  
US 6828343 B2 20041207  
PRAI US 1999-157148P P 19990930  
EP 2000-308131 A3 20000918  
US 2000-670759 A3 20000927  
US 2002-117370 A3 20020405  
CLASS  
PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES  
EP 1391460 ICM C07D495-04  
ICS C07D491-04; C07D209-52; A61K031-407; A61P003-10;  
A61P009-10; C07D495-14; C07D333-00; C07D209-00;  
C07D307-00  
IPC C07D0495-04 [ICM, 7]; C07D0491-04 [ICS, 7]; C07D0491-00

[ICS,7,C\*]; C07D0209-52 [ICS,7]; A61K0031-407 [ICS,7];  
A61P0003-10 [ICS,7]; A61P0003-00 [ICS,7,C\*];  
A61P0009-10 [ICS,7]; A61P0009-00 [ICS,7,C\*];  
C07D0495-14 [ICS,7]; C07D0495-00 [ICS,7,C\*];  
C07D0333-00 [ICS,7]; C07D0209-00 [ICS,7]; C07D0307-00  
[ICS,7]  
ECLA C07D491/04+307B+209B; C07D495/04+333B+209B;  
C07D495/14+333B+333B+209B  
EP 1088824 IPCI C07D0495-04 [ICM,6]; C07D0491-04 [ICS,6]; C07D0209-52  
[ICS,6]; A61K0031-407 [ICS,6]; A61P0003-10 [ICS,6];  
A61P0003-00 [ICS,6,C\*]; A61P0009-10 [ICS,6];  
A61P0009-00 [ICS,6,C\*]; C07D0495-04 [ICL,6];  
C07D0495-00 [ICL,6,C\*]; C07D0333-00 [ICL,6];  
C07D0209-00 [ICL,6]; C07D0491-04 [ICL,6]; C07D0491-00  
[ICL,6,C\*]; C07D0307-00 [ICL,6]; C07D0209-00 [ICL,6]  
IPCR C07D0491-048 [LA]; A61K0031-407 [LC\*]; A61K0031-407  
[LA]; A61K0031-427 [LC\*]; A61K0031-427 [LA];  
A61K0031-4523 [LC\*]; A61K0031-454 [LA]; A61K0031-5375  
[LC\*]; A61K0031-5377 [LA]; A61K0031-695 [LC\*];  
A61K0031-695 [LA]; A61K0038-00 [LC\*]; A61K0038-00  
[LA]; A61K0045-00 [LC\*]; A61K0045-00 [LA];  
A61P0003-00 [LC\*]; A61P0003-06 [LA]; A61P0003-10  
[LA]; A61P0009-00 [LC\*]; A61P0009-10 [LA];  
A61P0009-12 [LA]; A61P0027-00 [LC\*]; A61P0027-12  
[LA]; A61P0043-00 [LC\*]; A61P0043-00 [LA];  
C07D0209-00 [LC\*]; C07D0209-52 [LA]; C07D0491-00  
[LC\*]; C07D0491-04 [LA]; C07D0495-00 [LC\*];  
C07D0495-04 [LA]; C07D0495-14 [LA]; C07F0007-00  
[LC\*]; C07F0007-10 [LA]; C07K0005-00 [LC\*];  
C07K0005-00 [LA]  
ECLA C07D209/52; C07D491/04+307B+209B; C07D495/04+333B+209B  
US 2002183369 IPCI C07D0513-22 [ICM,7]; C07D0513-00 [ICM,7,C\*];  
A61K0031-429 [ICS,7]; A61K0031-424 [ICS,7];  
A61K0031-4188 [ICS,7]; A61K0031-4164 [ICS,7,C\*]  
IPCR C07D0209-00 [LC\*]; C07D0209-52 [LA]; C07D0491-00  
[LC\*]; C07D0491-04 [LA]; C07D0495-00 [LC\*];  
C07D0495-04 [LA]  
NCL 514/367.000; 514/375.000; 514/393.000; 514/412.000;  
548/153.000; 548/217.000; 548/303.100; 548/453.000  
ECLA C07D209/52; C07D491/04+307B+209B; C07D495/04+333B+209B  
US 2003195361 IPCI C07D0513-12 [ICM,7]; C07D0498-02 [ICS,7]; C07D0498-00  
[ICS,7,C\*]; C07D0513-02 [ICS,7]; C07D0513-00  
[ICS,7,C\*]; C07D0487-02 [ICS,7]; C07D0487-00 [ICS,7,C\*]  
IPCR C07D0209-00 [LC\*]; C07D0209-52 [LA]; C07D0491-00  
[LC\*]; C07D0491-04 [LA]; C07D0495-00 [LC\*];  
C07D0495-04 [LA]

phosphorylase inhibitors)  
IT Kidney, disease  
(diabetic nephropathy, treatment; preparation of fused  
pyrrolylcarboxamides as glycogen phosphorylase inhibitors)  
IT Nerve, disease  
(diabetic neuropathy, treatment; preparation of fused pyrrolylcarboxamides  
as glycogen phosphorylase inhibitors)  
IT Eye, disease  
(diabetic retinopathy, treatment; preparation of fused pyrrolylcarboxamides  
as glycogen phosphorylase inhibitors)  
IT Antioxidants  
(fatty acid oxidation inhibitors coadministration; preparation of fused  
pyrrolylcarboxamides as glycogen phosphorylase inhibitors)  
IT Gluconeogenesis  
(inhibitors coadministration; preparation of fused pyrrolylcarboxamides as  
glycogen phosphorylase inhibitors)  
IT Heart, disease  
(ischemia, treatment; preparation of fused pyrrolylcarboxamides as glycogen  
phosphorylase inhibitors)  
IT Anti-ischemic agents  
Anticholesteremic agents  
Antidiabetic agents  
Antihypertensives  
Drug delivery systems  
Human  
Hypolipemic agents  
(preparation of fused pyrrolylcarboxamides as glycogen phosphorylase  
inhibitors)  
IT Atherosclerosis  
Cataract  
Diabetes mellitus  
Hypercholesterolemia  
Hyperglycemia  
Hypertension  
Hypertriglyceridemia  
Ischemia  
(treatment; preparation of fused pyrrolylcarboxamides as glycogen  
phosphorylase inhibitors)  
IT Hyperlipidemia  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(treatment; preparation of fused pyrrolylcarboxamides as glycogen  
phosphorylase inhibitors)  
IT Peroxisome proliferator-activated receptors  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(g. PPAR-g agonists coadministration; preparation of fused  
pyrrolylcarboxamides as glycogen phosphorylase inhibitors)

NCL 548/153.000; 548/218.000; 548/303.100; 548/453.000  
ECLA C07D209/52; C07D491/04+307B+209B; C07D495/04+333B+209B  
OS MARPAT 140:199313  
GI

AB Title compds. [I; Q = substituted aryl, heteroaryl; Z, X = C, CH, CH<sub>2</sub>, N,  
O, S; X1 = NRA, CH<sub>2</sub>, O, S; dotted lines = bond, null; both dotted lines  
are not simultaneously bonds; R1 = H, halo, alkoxy, alkylthio, alkyl, CF<sub>3</sub>,  
NH<sub>2</sub>, alkylamino, dialkylamino, NO<sub>2</sub>, CN, CO<sub>2</sub>H, carboxyalkyl, alkanyl,  
alkynyl; Ra, Rb = H, alkyl; Y = CH(OH), null; R2R3 = atoms to form a 5-6  
membered ring containing 0-3 heteroatoms and 0-2 double bonds; R4 = COA; A =  
NRdRd, NRACH<sub>2</sub>CH<sub>2</sub>ORa, N-heterocyclyl; Rd = H, alkyl, alkoxy, aryl,  
(substituted) aryl, heteroaryl; Rc = H, CO<sub>2</sub>Ra, ORa, SRa, NRARa; n = 1-3],  
were prepared for treatment of diabetes, insulin resistance, diabetic  
neuropathy, diabetic nephropathy, diabetic retinopathy,  
cataracts, hyperglycemia, hypercholesterolemia, hypertension,  
hyperinsulinemia, hyperlipidemia, atherosclerosis, or tissue ischemia (no  
data). Thus, 6H-thieno[2,3-b]pyrrole-5-carboxylic acid and  
(3S)-amino-1-((3R,4S)-dihydroxypyrrolidin-1-yl)-(2R)-hydroxy-4-phenylbutan-  
1-one were coupled using 4-(dimethylamino)pyridine, 1-hydroxybenzotriazole  
hydrate and 1-(3-dimethylaminopropyl)-3-ethylcarbodiimide hydrochloride in  
CH<sub>2</sub>Cl<sub>2</sub>/DMF to give 6H-thieno[2,3-b]pyrrole-5-carboxylic acid  
[(1S)-benzyl-3-((3R,4S)-dihydroxypyrrolidin-1-yl)-(2R)-hydroxy-3-  
oxopropyl]amide.  
ST pyrrolylcarboxamide fused prepn glycogen phosphorylase inhibitor;  
thienopyrrolylcarboxamide prepn antidiabetic; diabetes insulin resistance  
diabetic neuropathy treatment fused pyrrolylcarboxamide; diabetic  
nephropathy retinopathy cataract hyperglycemia  
hypercholesterolemia hypertension treatment pyrrolylcarboxamide;  
hyperinsulinemia hyperlipidemia atherosclerosis tissue ischemia treatment  
fused pyrrolylcarboxamide  
IT Ischemia  
(cardiac, treatment; preparation of fused pyrrolylcarboxamides as glycogen  
phosphorylase inhibitors)  
IT Antiobesity agents  
a2-Adrenoceptor antagonists  
b-Adrenoceptor agonists  
(coadministration; preparation of fused pyrrolylcarboxamides as glycogen  
phosphorylase inhibitors)  
IT Sulfonylureas  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(coadministration; preparation of fused pyrrolylcarboxamides as glycogen

IT 9007-92-5, Glucagon, biological studies 106602-62-4, Amylin  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(antagonists coadministration; preparation of fused pyrrolylcarboxamides as  
glycogen phosphorylase inhibitors)  
IT 56-03-1D, Biguanide, derivs. 64-77-7, Tolbutamide 94-20-2,  
Chlorpropamide 114-86-3, Phenformin 458-24-2, Fenfluramine  
657-24-9, Metformin 692-13-7, Buformin 968-81-0, Acetohexamide  
1156-19-0, Tolazamide 2295-31-0D, Thiazolidinedione, derivs.  
7440-62-2D, Vanadium, complexes 9004-10-8, Insulin, biological studies  
9004-10-8D, Insulin, analogs 10238-21-8, Glibenclamide 12179-36-1D,  
Pervanadyl (VO(O<sub>2</sub>))+, complexes 23602-78-0, Benfluorex 28299-33-4D,  
Imidazoline, derivs. 29094-61-9, Glipizide 37353-31-4, Vanadate  
51037-30-0, Acipimox 51110-01-1D, Somatostatin, analogs 54870-28-9,  
Meglitinide 56180-94-0, Acarbose 66529-17-7, Midaglizole 72432-03-2,  
Miglitol 74772-77-3, Ciglitazone 75358-37-1, Linoglitazone 79944-58-4,  
Idazoxan 80879-63-6, Emiglitazone 83480-29-9, Voglibose 86615-96-5,  
BRL35135 88431-47-4, Clomoxir 89197-32-0, Efaroxan 90505-66-1, Ro  
16-8714 90730-96-4, BRL37344 93479-97-1, Glimepiride 97322-87-7,  
Troglitazone 104343-33-1, MDL-25637 105182-45-4, Fluparoxan  
105816-04-4, Nateglinide 106612-94-6, Human GLP-1  
-7-37 107444-51-9, Rat GLP-1(7-36)amide 109229-58-5, Englitazone  
110605-64-6, Isaglidole 111025-46-8, Pioglitazone 115656-32-1, D 7114  
122320-73-4, Rosiglitazone 122575-28-4, Nagliavan 122830-14-2,  
Deriglidole 124083-20-1, Etomoxir 127214-23-7, Camiglibose  
130714-47-5, WAG 994 133107-64-9, Insulin lispro 135062-02-1,  
Repaglinide 138908-40-4, CL 316243 141200-24-0, Darglitazone  
141758-74-9, AC2993 187887-46-3, Symlin 395214-16-1  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(coadministration; preparation of fused pyrrolylcarboxamides as glycogen  
phosphorylase inhibitors)  
IT 9001-42-7, a-Glucosidase 9025-82-5, Phosphodiesterase  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(inhibitors coadministration; preparation of fused pyrrolylcarboxamides as  
glycogen phosphorylase inhibitors)  
IT 9035-74-9, Glycogen phosphorylase  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(inhibitors; preparation of fused pyrrolylcarboxamides as glycogen  
phosphorylase inhibitors)  
IT 332098-11-0P 332098-12-1P 332098-13-2P 332098-14-3P 332098-15-4P  
332098-16-5P 332098-17-6P 332098-18-7P 332098-19-8P 332098-20-1P  
332098-21-2P 332098-22-3P 332098-23-4P 332098-24-5P 332098-25-6P  
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332098-61-0P 332098-63-2P 332098-65-4P  
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU  
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES  
(Uses)  
(preparation of fused pyrrolylcarboxamides as glycogen phosphorylase  
inhibitors)  
IT 637-81-0, Azidoacetic acid ethyl ester 1066-54-2,  
(Trimethylsilyl)acetylene 1126-09-6, Piperidine-4-carboxylic acid ethyl  
ester 4530-18-1, Boc-DL-Phenylalanine 6030-36-0, 4-Methylthiophene-2-  
carboxaldehyde 7283-96-7, 5-Chlorothiophene-2-carboxaldehyde  
13679-70-4, 5-Methyl-2-thiophenecarboxaldehyde 13734-34-4,  
Boc-L-Phenylalanine 14345-97-2, 2-Chloro-3-methylthiophene 17186-57-1  
18791-75-8, 4-Bromothiophene-2-carboxaldehyde 21508-19-0,  
5-Chlorofuran-2-carboxaldehyde 21921-76-6, 4-Bromo-2-furaldehyde  
24445-35-0 29669-49-6, 5-Fluorothiophene-2-carboxaldehyde 31486-85-8,  
Thieno[2,3-b]thiophene-2-carboxaldehyde 35357-56-3, 6H-Thieno[3,2-  
b]pyrrole-5-carboxylic acid ethyl ester 39793-31-2, 4H-Thieno[3,2-  
b]pyrrole-5-carboxylic acid 51856-25-8, 6H-Thieno[2,3-b]pyrrole-5-  
carboxylic acid 51856-29-2, 2-Formyl-6H-thieno[2,3-b]pyrrole-5-  
carboxylic acid ethyl ester 57500-51-3, 4-Chlorothiophene-2-  
carboxaldehyde 58963-45-4, 2-Formyl-6H-thieno[2,3-b]pyrrole-5-carboxylic  
acid 59958-27-9, 2-Formyl-4H-thieno[3,2-b]pyrrole-5-carboxylic acid  
ethyl ester 62023-60-3, (2R,3S)-3-Benzoyloxycarbonylamino-2-hydroxy-4-  
phenylbutyric acid 80709-80-4, 2-Methyl-4H-furo[3,2-b]pyrrole-5-  
carboxylic acid 80709-83-7, 2-Bromo-4H-furo[3,2-b]pyrrole-5-carboxylic  
acid ethyl ester 91545-55-0, 2-Bromo-6H-thieno[2,3-b]pyrrole-5-  
carboxylic acid ethyl ester 105181-72-4, (2R,3S)-3-tert-  
Butoxycarbonylamino-2-hydroxy-4-phenylbutyric acid 153548-49-3  
164667-45-2, 2-Formyl-4H-furo[3,2-b]pyrrole-5-carboxylic acid  
186431-46-9 186432-05-3 238749-50-3, 2-Bromo-4H-thieno[3,2-b]pyrrole-5-  
carboxylic acid ethyl ester 519188-80-8  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of fused pyrrolylcarboxamides as glycogen phosphorylase  
inhibitors)  
IT 65782-04-9P, 5-Chloro-4-methylthiophene-2-carboxaldehyde 238749-54-7P,  
2-Methyl-4H-thieno[3,2-b]pyrrole-5-carboxylic acid ethyl ester  
332098-79-0P 332098-81-4P 332098-83-6P, 2-Bromo-6H-thieno[2,3-  
b]pyrrole-5-carboxylic acid 332098-85-8P, 2-Methyl-6H-thieno[2,3-  
b]pyrrole-5-carboxylic acid ethyl ester 332098-87-0P,  
2-Methyl-6H-thieno[2,3-b]pyrrole-5-carboxylic acid 332098-89-2P  
332098-91-6P 332098-93-8P 332098-95-0P 332098-97-2P 332098-99-4P  
332099-01-1P, 2-Chloro-6H-thieno[2,3-b]pyrrole-5-carboxylic acid ethyl  
ester 332099-03-3P, 2-Chloro-6H-thieno[2,3-b]pyrrole-5-carboxylic acid  
332099-05-5P, 2,4-Dichloro-6H-thieno[2,3-b]pyrrole-5-carboxylic acid ethyl  
ester 332099-07-7P, 2,4-Dichloro-6H-thieno[2,3-b]pyrrole-5-carboxylic

acid 332099-09-9P, 2-Bromo-4H-thieno[3,2-b]pyrrole-5-carboxylic acid  
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332099-14-6P, 2-Methyl-4H-thieno[3,2-b]pyrrole-5-carboxylic acid  
332099-16-8P, 2-Cyano-6H-thieno[2,3-b]pyrrole-5-carboxylic acid  
332099-18-0P 332099-20-4P 332099-22-6P, 2-Fluoro-4H-thieno[3,2-  
b]pyrrole-5-carboxylic acid ethyl ester 332099-24-8P,  
2-Fluoro-4H-thieno[3,2-b]pyrrole-5-carboxylic acid 332099-26-0P,  
2-Cyano-4H-furo[3,2-b]pyrrole-5-carboxylic acid 332099-28-2P,  
2-Chloro-4H-furo[3,2-b]pyrrole-5-carboxylic acid ethyl ester  
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332099-54-4P 332099-55-5P 332099-56-6P, 2-Chloro-3-methyl-4H-  
thieno[3,2-b]pyrrole-5-carboxylic acid ethyl ester 332099-58-8P,  
2-Chloro-3-methyl-4H-thieno[3,2-b]pyrrole-5-carboxylic acid 332099-60-2P  
332099-62-4P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation of fused pyrrolylcarboxamides as glycogen phosphorylase  
inhibitors)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS  
RECORD

RE  
(1) Esteve, L; ES 2081747 A 1996 CAPLUS  
(2) Hitzel, V; US 4325963 A 1982 CAPLUS  
(3) Pfizer; EP 0846464 A 1998 CAPLUS

L33 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2003:570833 CAPLUS <<LOGINID::20070124>>  
DOCUMENT NUMBER: 139:111682  
TITLE: Combined use of a GLP-1 compound  
and a modulator of diabetic late complications  
INVENTOR(S): Knudsen, Lotte Bjerre; Selmer, Johan  
PATENT ASSIGNEE(S): Novo Nordisk A/S, Den.  
SOURCE: PCT Int. Appl., 22 pp.  
CODEN: PIXXD2

DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003059372	A2	20030724	WO 2002-DK888	20021220 <--
WO 2003059372	A3	20040325		
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JP 2005516968	T	20050609	JP 2003-559533	20021220
US 2003144206	A1	20030731	US 2002-328282	20021223 <--
PRIORITY APPLN. INFO.: DK 2001-1969 A 20011229				
DK 2002-760 A 20020517				
DK 2001-969 A 20011229				
US 2002-350087P P 20020117				
WO 2002-DK888 W 20021220				

AN 2003:570833 CAPLUS <<LOGINID::20070124>>

DN 139:111682

ED Entered STN: 25 Jul 2003

TI Combined use of a GLP-1 compound and a modulator of  
diabetic late complications

IN Knudsen, Lotte Bjerre; Selmer, Johan

PA Novo Nordisk A/S, Den.

SO PCT Int. Appl., 22 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM A61K038-00

CC 1-10 (Pharmacology)

Section cross-reference(s): 2, 63

FAN.CNT 1

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WO 2002-DK888 W 20021220				

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

WO 2003059372 ICM A61K038-00  
IPC A61K0038-00 [ICM,7]  
IPCR A61K0045-00 [LC\*]; A61K0045-00 [LA]; A61K0031-138 [LC\*]; A61K0031-138 [LA]; A61K0031-165 [LC\*]; A61K0031-165 [LA]; A61K0031-167 [LC\*]; A61K0031-167 [LA]; A61K0031-21 [LC\*]; A61K0031-216 [LA]; A61K0031-35 [LC\*]; A61K0031-35 [LA]; A61K0031-401 [LC\*]; A61K0031-401 [LA]; A61K0031-403 [LC\*]; A61K0031-403 [LA]; A61K0031-404 [LA]; A61K0031-407 [LC\*]; A61K0031-407 [LA]; A61K0031-4164 [LC\*]; A61K0031-4166 [LA]; A61K0031-4184 [LA]; A61K0031-4188 [LA]; A61K0031-4196 [LC\*]; A61K0031-4196 [LA]; A61K0031-472 [LC\*]; A61K0031-472 [LA]; A61K0031-5375 [LC\*]; A61K0031-5377 [LA]; A61K0031-55 [LC\*]; A61K0031-55 [LA]; A61K0038-00 [LC\*]; A61K0038-00 [LA]; A61K0038-26 [LC\*]; A61K0038-26 [LA]; A61P0003-00 [LC\*]; A61P0003-10 [LA]; A61P0009-00 [LC\*]; A61P0009-10 [LA]; A61P0009-12 [LA]; A61P0013-00 [LC\*]; A61P0013-12 [LA]; A61P0025-00

[I,C\*]; A61P0025-00 [LA]; A61P0025-02 [LA];  
A61P0027-00 [LC\*]; A61P0027-02 [LA]; A61P0043-00  
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IPCR A61K0045-00 [LC\*]; A61K0045-00 [LA]; A61K0031-138  
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A61P0027-00 [LC\*]; A61P0027-02 [LA]; A61P0043-00  
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EP 1461070 IPCI A61K0038-26 [ICM,7]; A61K0031-35 [ICS,7]; A61P0003-10  
[ICS,7]; A61P0003-00 [ICS,7,C\*]  
IPCR A61K0045-00 [LC\*]; A61K0045-00 [LA]; A61K0031-138  
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A61P0003-00 [LC\*]; A61P0003-10 [LA]; A61P0009-00  
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A61P0027-00 [LC\*]; A61P0027-02 [LA]; A61P0043-00  
[LC\*]; A61P0043-00 [LA]

4C086/NA05; 4C086/NA06; 4C086/ZA02; 4C086/ZA26;  
4C086/ZA33; 4C086/ZA36; 4C086/ZA42; 4C086/ZA81;  
4C086/ZC20; 4C086/ZC35; 4C086/ZC42; 4C206/AA01;  
4C206/AA02; 4C206/FA18; 4C206/FA19; 4C206/FA21;  
4C206/GA01; 4C206/GA31; 4C206/KA01; 4C206/MA02;  
4C206/MA04; 4C206/MA11; 4C206/MA72; 4C206/MA75;  
4C206/NA05; 4C206/NA06; 4C206/ZA02; 4C206/ZA26;  
4C206/ZA33; 4C206/ZA36; 4C206/ZA42; 4C206/ZA81;  
4C206/ZC20; 4C206/ZC35; 4C206/ZC42  
US 2003144206 IPCI A61K0038-26 [ICM,7]; A61K0031-401 [ICS,7]  
IPCR A61K0031-401 [LC\*]; A61K0031-401 [LA]; A61K0038-26  
[LC\*]; A61K0038-26 [LA]  
NCL 514/012.000; 514/423.000  
AB Methods and uses for treatment of diabetic late complications comprising  
administration of a GLP-1 compound and a modulator of  
diabetic complications.  
ST GLP1 diabetes late complication therapy; glucagon like peptide I analog  
fragment antidiabetic  
IT Angiotensin receptor antagonists  
Antihypertensives  
Human  
Hypertension  
Protein sequences  
b-Adrenoceptor antagonists  
b1-Adrenoceptor antagonists  
(combined use of a GLP-1 compound and a modulator of  
diabetic late complications)  
IT Kidney, disease  
(diabetic nephropathy; combined use of a GLP-  
1 compound and a modulator of diabetic late complications)  
IT Nerve, disease  
(diabetic neuropathy; combined use of a GLP-1  
compound and a modulator of diabetic late complications)  
IT Eye, disease  
(diabetic retinopathy; combined use of a GLP-1  
compound and a modulator of diabetic late complications)  
IT Gene, animal  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)  
(glp-1; combined use of a GLP-1  
compound and a modulator of diabetic late complications)  
IT Diabetes mellitus  
(non-insulin-dependent; combined use of a GLP-1  
compound and a modulator of diabetic late complications)  
IT Antidiabetic agents  
Drug delivery systems

JP 2005516968 IPCI A61K0038-00 [ICM,7]; A61K0031-138 [ICS,7]; A61K0031-165  
[ICS,7]; A61K0031-167 [ICS,7]; A61K0031-216 [ICS,7];  
A61K0031-21 [ICS,7,C\*]; A61K0031-401 [ICS,7];  
A61K0031-403 [ICS,7]; A61K0031-404 [ICS,7];  
A61K0031-407 [ICS,7]; A61K0031-4166 [ICS,7];  
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A61K0031-4164 [ICS,7,C\*]; A61K0031-4196 [ICS,7];  
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A61K0031-5375 [ICS,7,C\*]; A61K0031-55 [ICS,7];  
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4C084/MA55; 4C084/MA56; 4C084/MA59; 4C084/MA63;  
4C084/NA05; 4C084/NA06; 4C084/ZA01; 4C084/ZA262;  
4C084/ZA331; 4C084/ZA361; 4C084/ZA421; 4C084/ZA422;  
4C084/ZA811; 4C084/ZC202; 4C084/ZC351; 4C084/ZC422;  
4C086/AA01; 4C086/AA02; 4C086/BC07; 4C086/BC10;  
4C086/BC13; 4C086/BC30; 4C086/BC32; 4C086/BC38;  
4C086/BC62; 4C086/BC85; 4C086/CB22; 4C086/CB27;  
4C086/GA07; 4C086/GA10; 4C086/GA12; 4C086/MA02;  
4C086/MA04; 4C086/MA07; 4C086/MA52; 4C086/MA55;

(oral; combined use of a GLP-1 compound and a  
modulator of diabetic late complications)  
IT Drug delivery systems  
(parenterals; combined use of a GLP-1 compound and a  
modulator of diabetic late complications)  
IT 496765-91-4  
RL: PAC (Pharmacological activity); PRP (Properties); THU (Therapeutic  
use); BIOL (Biological study); USES (Uses)  
(amino acid sequence; combined use of a GLP-1  
compound and a modulator of diabetic late complications)  
IT 525-66-6, Propranolol 13523-86-9, Pindolol 26839-75-8, Timolol  
29122-68-7, Atenolol 37517-30-9, Acebutolol 42200-33-9, Nadolol  
51384-51-1, Metoprolol 62571-86-2, Captopril 75847-73-3, Enalapril  
76547-98-3, Lisinopril 81147-92-4, Esmolol 83647-97-6, Spirapril  
85441-61-8, Quinapril 86541-75-5, Benazepril 87333-19-5, Ramipril  
87679-37-6, Trandolapril 89371-37-9, Imidapril 89750-14-1D,  
GLP-1, analogs or fragments 98048-97-6, Fosinopril  
107133-36-8, Perindopril erbumine 114798-26-4, Losartan 135038-57-2,  
Alatriopril 136087-85-9, Fildarestat 137862-53-4, Valsartan  
138402-11-6, Irbesartan 141732-76-5, Exendin-4 141732-76-5D,  
Exendin-4, derivs. 169939-94-0, Ly 333531  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)  
(combined use of a GLP-1 compound and a modulator of  
diabetic late complications)  
IT 9015-82-1, Angiotensin-converting enzyme 9028-31-3, Aldose reductase  
141436-78-4, Protein kinase C  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)  
(inhibitors; combined use of a GLP-1 compound and a  
modulator of diabetic late complications)  
L33 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2003:320036 CAPLUS <<LOGINID:20070124>>  
DOCUMENT NUMBER: 138:338498  
TITLE: Preparation of human glucagon-like-peptide-1 mimics  
and their use in the treatment of diabetes and related  
conditions  
INVENTOR(S): Natarajan, Sessa I.; Bastos, Margarita M.;  
Bernatowicz, Michael S.; Mapelli, Claudio; Lee, Ving;  
Ewing, William R.  
PATENT ASSIGNEE(S): Bristol-Myers Squibb Company, USA  
SOURCE: PCT Int. Appl., 153 pp.  
CODEN: PDXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003033671	A2	20030424	WO 2002-US33386	20021018 <--
WO 2003033671	A3	20051229		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2463908	A1	20030424	CA 2002-2463908	20021018 <--
JP 2005514337	T	20050519	JP 2003-536401	20021018
CN 1630709	A	20050622	CN 2002-820558	20021018
EP 1572892	A2	20050914	EP 2002-782185	20021018
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BR 2002013377	A	20060523	BR 2002-13377	20021018
NO 2004001203	A	20040610	NO 2004-1203	20040323
ZA 2004002846	A	20050816	ZA 2004-2846	20040415
PRIORITY APPLN. INFO.: US 2001-342015P P 20011018				
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OTHER SOURCE(S): MARPAT 138:338498  
AN 2003:320036 CAPLUS <<LOGINID::20070124>>  
DN 138:338498  
ED Entered STN: 25 Apr 2003  
TI Preparation of human glucagon-like-peptide-1 mimics and their use in the treatment of diabetes and related conditions  
IN Natarajan, Seshu I.; Bastos, Margarita M.; Bernatowicz, Michael S.; Mapelli, Claudio; Lee, Ving; Ewing, William R.  
PA Bristol-Myers Squibb Company, USA  
SO PCT Int. Appl., 153 pp.  
CODEN: PDXXD2  
DT Patent  
LA English  
IC ICM C12N  
CC 34-3 (Amino Acids, Peptides, and Proteins)  
Section cross-reference(s): 1, 63  
FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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[LC\*]; A61K0038-26 [LA]; A61P0003-00 [LC\*];  
A61P0003-04 [LA]; A61P0003-06 [LA]; A61P0003-10 [LA]; A61P0005-00 [LC\*]; A61P0005-50 [LA];  
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C07K0007-08 [LA]; C07K0014-00 [LC\*]; C07K0014-00 [LA]; C07K0014-435 [LC\*]; C07K0014-605 [LA]  
JP 2005514337 IPCI C07K0007-06 [ICM,7]; A61K0038-00 [ICS,7]; A61P0003-04 [ICS,7]; A61P0003-06 [ICS,7]; A61P0003-10 [ICS,7];  
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FTERM 4C084/AA02; 4C084/AA06; 4C084/AA07; 4C084/BA01; 4C084/BA08; 4C084/BA17; 4C084/BA23; 4C084/BA32; 4C084/CA59; 4C084/DB35; 4C084/MA01; 4C084/NA14; 4C084/ZA012; 4C084/ZA332; 4C084/ZA452; 4C084/ZA702; 4C084/ZA812; 4C084/ZA892; 4C084/ZC032; 4C084/ZC332; 4C084/ZC352; 4C084/ZC412; 4H045/AA10; 4H045/AA30; 4H045/BA10; 4H045/BA16; 4H045/BA17; 4H045/BA18; 4H045/DA37; 4H045/EA20; 4H045/FA10; 4H045/FA20; 4H045/FA33; 4H045/FA34; 4H045/GA21  
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PI WO 2003033671 A2 20030424 WO 2002-US33386 20021018 <--  
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NO 2004001203 A 20040610 NO 2004-1203 20040323  
ZA 2004002846 A 20050816 ZA 2004-2846 20040415  
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PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES  
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IPCI C12N [ICM,7]  
IPCR A61K0038-00 [LC\*]; A61K0038-00 [LA]; A61K0038-26 [LC\*]; A61K0038-26 [LA]; A61P0003-00 [LC\*];  
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CA 2463908 IPCI C07K0014-605 [ICM,7]; C07K0014-435 [ICM,7,C\*]; C07K0007-06 [ICS,7]; C07K0007-00 [ICS,7,C\*]; A61K0038-00 [ICS,7]; A61K0038-26 [ICS,7]  
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EP 1572892 IPCI C12N0001-00 [ICM,7]  
IPCR A61K0038-00 [LC\*]; A61K0038-00 [LA]; A61K0038-08 [LC\*]; A61K0038-08 [LA]; A61K0038-26 [LC\*];  
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ECLA C07K014/605  
BR 2002013377 IPCI A61K0038-00 [ICS,7]; A61K0038-08 [ICS,7]; C07K0002-00 [ICS,7]  
IPCR A61K0038-00 [N,C\*]; C07K0014-435 [LC\*]; A61K0038-00 [N,A]; C07K0014-605 [LA]  
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NO 2004001203 IPCI C07K0014-605 [ICM,7]; C07K0014-435 [ICM,7,C\*]; C07K0004-00 [ICS,7]; A61K0038-26 [ICS,7]; A61K0038-08 [ICS,7]; A61K0038-10 [ICS,7]  
IPCR A61K0038-00 [LC\*]; A61K0038-00 [LA]; A61K0038-26 [LC\*]; A61K0038-26 [LA]; A61P0003-00 [LC\*];  
A61P0003-04 [LA]; A61P0003-06 [LA]; A61P0003-10 [LA]; A61P0005-00 [LC\*]; A61P0005-50 [LA]; A61P0009-00 [LC\*]; A61P0009-10 [LA]; A61P0009-12 [LA]; A61P0013-00 [LC\*]; A61P0013-12 [LA]; A61P0017-00 [LC\*]; A61P0017-02 [LA]; A61P0025-00 [LC\*]; A61P0025-00 [LA]; A61P0027-00 [LC\*];  
A61P0027-02 [LA]; A61P0043-00 [LC\*]; A61P0043-00 [LA]; C07K0007-00 [LC\*]; C07K0007-06 [LA]; C07K0007-08 [LA]; C07K0014-00 [LC\*]; C07K0014-00 [LA]; C07K0014-435 [LC\*]; C07K0014-605 [LA]  
ECLA C07K014/605  
ZA 2004002846 IPCR A61K0038-00 [N,C\*]; C07K0014-435 [LC\*]; A61K0038-00 [N,A]; C07K0014-605 [LA]  
ECLA C07K014/605  
OS MARPAT 138:338498  
AB The invention provides novel human glucagon-like peptide-1 (GLP-1) peptide mimics A-Xaa1-Xaa2-Xaa3-Xaa4-Xaa5-Xaa6-Xaa7-Xaa8-Xaa9-Y-Z-B [Xaa1-Xaa9 are naturally or non-naturally occurring amino acid residues; Y and Z are amino acid residues which may be substituted; A and B are optionally present; A is H, an amino acid or peptide containing .apprx.

1-15 amino acid residues, an R group [H, (cyclo)alkyl, cycloalkylalkyl, heterocyclyl, heterocycloalkyl, (hetero)aryl, arylalkyl, arylalkoxyalkyl, heteroarylalkyl, or heteroaryloxyalkyl], an RCO (amide) group, a carbamate group, a urea, a sulfonamido, or an aminosulfonyl group; B is OH, alkoxo, etc., an amino or amino acid residue, or a peptide containing from 1-15 amino acid residues, terminating at the C-terminus as a carboxamide, ester, carboxyl, or an amino alc.] that mimic the biol. activity of the native GLP-1 peptide and thus are useful for the treatment or prevention of diseases or disorders associated with GLP activity. These chemical-modified peptides stimulate insulin secretion in type II diabetics and produce other beneficial insulinotropic responses, while exhibiting increased stability to proteolytic cleavage making them ideal therapeutic candidates for oral or parenteral administration. A method of preparing the polypeptides comprises replacing the message sequence of the polypeptide with a variant message sequence capable of inducing receptor mediated signal transduction. An example is claimed peptide H-AEGTFTSD-Bip(2-Et)-Bip(2-Me)-NH2 (Bip = biphenylalanine residue).

ST glucagon like peptide mimic prepn treatment diabetes

IT Antiarteriosclerotics

(antiatherosclerotics; preparation of human glucagon-like-peptide-1 mimics for use in treatment of diabetes and related conditions)

IT Kidney, disease

(diabetic nephropathy; preparation of human glucagon-like-peptide-1 mimics for use in treatment of diabetes and related conditions)

IT Nerve, disease

(diabetic neuropathy; preparation of human glucagon-like-peptide-1 mimics for use in treatment of diabetes and related conditions)

IT Eye, disease

(diabetic retinopathy; preparation of human glucagon-like-peptide-1 mimics for use in treatment of diabetes and related conditions)

IT Metabolic disorders

(metabolic syndrome X; preparation of human glucagon-like-peptide-1 mimics for use in treatment of diabetes and related conditions)

IT Antidiabetic agents

Antihypertensives

Antiobesity agents

Atherosclerosis

Diabetes mellitus

Human

Hyperglycemia

Hypertension

Hypertriglyceridemia

Hypolipemic agents

Obesity

Wound healing

(preparation of human glucagon-like-peptide-1 mimics for use in treatment of

diabetes and related conditions)

IT Hyperlipidemia

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(preparation of human glucagon-like-peptide-1 mimics for use in treatment of diabetes and related conditions)

IT Peptides, preparation

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU

(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES

(Uses)

(preparation of human glucagon-like-peptide-1 mimics for use in treatment of diabetes and related conditions)

IT 89750-14-IDP, Glucagon-like peptide 1, mimics 516514-32-2P

516514-38-8P 516514-43-5P 516514-47-9P 516514-52-6P 516514-55-9P

516514-58-2P 516514-61-7P 516514-64-0P 516514-68-4P 516514-72-0P

516514-75-3P 516514-78-6P 516514-81-1P 516514-84-4P 516514-87-7P

516514-91-3P 516514-95-7P 516514-99-1P 516515-03-0P 516515-06-3P

516515-09-6P 516515-14-3P 516515-18-7P 516515-22-3P 516515-26-7P

516515-30-3P 516515-34-7P 516515-38-1P 516515-42-7P 516515-46-1P

516515-50-7P 516515-55-2P 516515-59-6P 516515-63-2P 516515-68-7P

516515-72-3P 516515-76-7P 516515-80-3P 516515-84-7P 516515-88-1P

516515-92-7P 516515-96-1P 516516-01-1P 516516-06-6P 516516-10-2P

516516-14-6P 516516-18-0P 516516-22-6P 516516-26-0P 516516-31-7P

516516-35-1P 516516-39-5P 516516-44-2P 516516-50-0P 516516-55-5P

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516521-55-4P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU

(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES

(Uses)

(preparation of human glucagon-like-peptide-1 mimics for use in treatment of diabetes and related conditions)

IT 150-46-9, Triethyl borate 1973-22-4, 1 Bromo 2 ethylbenzene 4326-36-7

16419-60-6, o Tolyboronic acid 93267-04-0 516521-49-6

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of human glucagon-like-peptide-1 mimics for use in treatment of diabetes and related conditions)

IT 90002-36-1P, 2 Ethylphenylboronic acid 112766-18-4P 516521-46-3P

516521-47-4P 516521-48-5P 516521-50-9P 516521-51-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)

(preparation of human glucagon-like-peptide-1 mimics for use in treatment of diabetes and related conditions)

IT 51-64-9, Dexamphetamine 94-20-2, Chlorpropamide 122-09-8, Phentermine

637-07-0, Clofibrate 657-24-9, Metformin 9004-10-8, Insulin,

biological studies 10238-21-8, Glyburide 14838-15-4,

Phenylpropanolamine 21187-98-4, Glucalide 22232-71-9, Mazindol

25812-30-0, Gemfibrozil 29094-61-9, Glipizide 49562-28-9, Fenofibrate

56180-94-0, Acarbose 72432-03-2, Miglitol 75330-75-5, Lovastatin

79902-63-9, Simvastatin 81093-37-0, Pravastatin 93479-97-1,

Glimepiride 93957-54-1, Fluvastatin 96829-58-2, Orlistat 97240-79-4,

Topiramate 97322-87-7, Troglitazone 105816-04-4, Nateglinide

106650-56-0, Sibutramine 111025-46-8, Pioglitazone 122320-73-4,

Rosiglitazone 134523-00-5, Atorvastatin 135062-02-1, Repaglinide

141750-63-2, Nivastatin 141758-74-9, AC 2993 144288-97-1, TS-962

145599-86-6, Cerivastatin 152755-31-2, LY295427 159183-92-3, L750355

161600-01-7, Isaglitazone 166518-60-1, Avasimibe 170861-63-9, JTT-501

176435-10-2, LY315902 178759-95-0, MD 700 196808-45-4 199113-98-9

199914-96-0, YM-440 213252-19-8, KRP297 244081-42-3, AJ9677

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287714-41-4 335149-08-1, L895645 335149-14-9, R-119702 335149-15-0,

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2,

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RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(preparation of human glucagon-like-peptide-1 mimics for use in treatment of diabetes and related conditions)

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AN 2003:390202 BIOSIS <<LOGINID::20070124>>

DN PREV200300390202

TI The glucagon-like peptides: A double-edged therapeutic sword?.

AU Perry, TracyAnn [Reprint Author]; Greig, Nigel H.

CS Section of Drug Design and Development, Laboratory of Neurosciences,

Gerontology Research Center, National Institute on Aging, National

Institutes of Health, 5600 Nathan Shock Drive, Baltimore, MD, 21224, USA

perry@grc.nia.nih.gov

SO Trends in Pharmacological Sciences, (July 2003) Vol. 24, No. 7,

pp. 377-383. print.

ISSN: 0165-6147 (ISSN print).

DT Article

General Review; (Literature Review)

LA English

ED Entered STN: 27 Aug 2003

Last Updated on STN: 27 Aug 2003

AB Glucagon-like peptide-1 (7-36)-amide (GLP-1) is an endogenous peptide that is secreted from the gut in response to the presence of food. Recent studies have established that GLP-

1 and its longer-acting analog exendin-4 have multiple synergistic effects on glucose-dependent, insulin secretion pathways of the pancreatic beta-cell and on plasticity in neuronal cells. Recent interest has focused on the development of these peptides as a novel therapeutic strategy for non-insulin-dependent (type 2) diabetes mellitus and associated neuropathy. This is with a view to developing lead compounds, based on neurotrophic action, for central and peripheral degenerative disorders such as stroke and Alzheimer's disease in addition to the peripheral neuropathy associated with type 2 diabetes mellitus. Here, we address recent advances in the biological action of GLP-1 and its related analogs.

CC Cytology - Animal 02506  
 Biochemistry studies - Proteins, peptides and amino acids 10064  
 Biochemistry studies - Carbohydrates 10068  
 Pathology - Therapy 12512  
 Metabolism - Metabolic disorders 13020  
 Cardiovascular system - Blood vessel pathology 14508  
 Endocrine - General 17002  
 Endocrine - Pancreas 17008  
 Endocrine - Neuroendocrinology 17020  
 Nervous system - Physiology and biochemistry 20504  
 Nervous system - Pathology 20506  
 Pharmacology - General 22002

IT Major Concepts  
 Endocrine System (Chemical Coordination and Homeostasis); Nervous System (Neural Coordination); Pharmacology

IT Paris, Structures, & Systems of Organisms  
 beta cells: endocrine system; neuronal cells: nervous system

IT Diseases  
 Alzheimer's disease: behavioral and mental disorders, nervous system disease  
 Alzheimer Disease (MeSH)

IT Diseases  
 diabetic neuropathy: endocrine disease/pancreas, metabolic disease, nervous system disease  
 Diabetic Nephropathies (MeSH)

IT Diseases  
 stroke: nervous system disease, vascular disease  
 Cerebrovascular Disorders (MeSH)

IT Diseases  
 type 2 diabetes mellitus: endocrine disease/pancreas, metabolic disease  
 Diabetes Mellitus, Non-Insulin-Dependent (MeSH)

IT Chemicals & Biochemicals  
 glucagon-like peptide-1(7-36)-amide; glucose; insulin

IT Miscellaneous Descriptors  
 drug development

the patients, known duration of diabetes, metabolic control, BMI, or residual beta-cell pancreatic function. Endogenous creatinine clearance was significantly reduced under conditions of overt diabetic nephropathy, compared with normo and microalbuminuric patients ( $p < 0.01$ ). Urinary excretion of GLP-1 was significantly higher in normoalbuminuric patients compared to controls ( $490.4 \pm 211.5$  vs.  $275.5 \pm 132.1$  pg/min;  $p < 0.05$ ), with further increase under incipient diabetic nephropathy conditions ( $648.6 \pm 305$  pg/min;  $p < 0.01$ ). No significant difference resulted, in contrast, between macroproteinuric patients and non-diabetic subjects. Taking all patients examined into account, a significant positive relationship emerged between urinary GLP-1 and creatinine clearance ( $p = 0.004$ ). In conclusion, an early tubular impairment in type 2 diabetes would occur before the onset of glomerular permeability alterations. The tubular dysfunction seems to evolve with the development of persistent microalbuminuria. Finally, the advanced tubular involvement, in terms of urinary GLP1 excretion, under overt diabetic nephropathy conditions would be masked by severe concomitant glomerular damage with the coexistence of both alterations resulting in a peptide excretion similar to control subjects.

CC Biochemistry studies - Proteins, peptides and amino acids 10064  
 Metabolism - Metabolic disorders 13020  
 Urinary system - Pathology 15506  
 Endocrine - General 17002  
 Endocrine - Pancreas 17008

IT Major Concepts  
 Clinical Endocrinology (Human Medicine, Medical Sciences); Nephrology (Human Medicine, Medical Sciences)

IT Diseases  
 diabetic nephropathy: endocrine disease/pancreas, metabolic disease, urologic disease  
 Diabetic Nephropathies (MeSH)

IT Diseases  
 type 2 diabetes mellitus: endocrine disease/pancreas, metabolic disease, non-insulin-dependent diabetes mellitus  
 Diabetes Mellitus, Non-Insulin-Dependent (MeSH)

IT Chemicals & Biochemicals  
 creatinine; glucagon-like peptide 1: renal tubular integrity indicator; glucagon-like peptide 1 7-36 amide [GLP-1 7-36 amide]; urinary excretion

IT Miscellaneous Descriptors  
 glomerular permeability

ORGN Classifier  
 Hominidae 86215  
 Super Taxa  
 Primates; Mammalia; Vertebrata; Chordata; Animalia

RN 118549-37-4 (glucagon-like peptide-1(7-36)-amide)  
 50-99-7Q (glucose)  
 58367-01-4Q (glucose)  
 9004-10-8 (insulin)

L33 ANSWER 6 OF 9 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

DUPLICATE 1  
 ACCESSION NUMBER: 2001:506591 BIOSIS <<LOGINID::20070124>>  
 DOCUMENT NUMBER: PREV200100506591  
 TITLE: Urinary excretion of glucagon-like peptide 1 (GLP-1) 7-36 amide in human type 2 (non-insulin-dependent) diabetes mellitus.  
 AUTHOR(S): Lugari, R. [Reprint author]; Ugoletti, D.; Dei Cas, A.; Barilli, A. L.; Iotti, M.; Marani, B.; Orlandini, A.; Gnudi, A.; Zandomeneghi, R.  
 CORPORATE SOURCE: Cattedra di Endocrinologia, Via Gramsci 14, 43100, Parma, Italy  
 endoparm@ipr.univ.cce.unipr.it  
 SOURCE: Hormone and Metabolic Research, (September, 2001) Vol. 33, No. 9, pp. 568-571. print.  
 CODEN: HMMRA2. ISSN: 0018-5043.  
 DOCUMENT TYPE: Article  
 LANGUAGE: English  
 ENTRY DATE: Entered STN: 31 Oct 2001  
 Last Updated on STN: 23 Feb 2002  
 AN 2001:506591 BIOSIS <<LOGINID::20070124>>  
 DN PREV200100506591  
 TI Urinary excretion of glucagon-like peptide 1 (GLP-1) 7-36 amide in human type 2 (non-insulin-dependent) diabetes mellitus.  
 AU Lugari, R. [Reprint author]; Ugoletti, D.; Dei Cas, A.; Barilli, A. L.; Iotti, M.; Marani, B.; Orlandini, A.; Gnudi, A.; Zandomeneghi, R.  
 CS Cattedra di Endocrinologia, Via Gramsci 14, 43100, Parma, Italy  
 endoparm@ipr.univ.cce.unipr.it  
 SO Hormone and Metabolic Research, (September, 2001) Vol. 33, No. 9, pp. 568-571. print.  
 CODEN: HMMRA2. ISSN: 0018-5043.  
 DT Article  
 LA English  
 ED Entered STN: 31 Oct 2001  
 Last Updated on STN: 23 Feb 2002  
 AB The urinary excretion of insulinotropic glucagon-like peptide 1 (GLP-1) was investigated as an indicator of renal tubular integrity in 10 healthy subjects and in 3 groups of type 2 diabetic patients with different degrees of urinary albumin excretion rate. No significant difference emerged between the groups with respect to age of

Organism Name  
 human: patient  
 Taxa Notes  
 Animals, Chordates, Humans, Mammals, Primates, Vertebrates  
 RN 60-27-5 (creatinine)

L33 ANSWER 7 OF 9 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 96034762 EMBASE <<LOGINID::20070124>>  
 DOCUMENT NUMBER: 1996034762  
 TITLE: Gastric emptying, glucose responses, and insulin secretion after a liquid test meal: Effects of exogenous glucagon-like peptide-1 (GLP-1)(7-36) amide in type 2 (noninsulin-dependent) diabetic patients.  
 AUTHOR: Willms B.; Werner J.; Holst J.J.; Orskov C.; Creutzfeldt W.; Nauck M.A.  
 CORPORATE SOURCE: Department of Medicine, Ruhr-University Bochum, Knappschafts-Krankenhaus, In der Schornau 23-25, 44892 Bochum, Germany  
 SOURCE: Journal of Clinical Endocrinology and Metabolism, (1996) Vol. 81, No. 1, pp. 327-332. ISSN: 0021-972X CODEN: JCEMAZ  
 COUNTRY: United States  
 DOCUMENT TYPE: Journal; Article  
 FILE SEGMENT: 003 Endocrinology  
 037 Drug Literature Index  
 LANGUAGE: English  
 SUMMARY LANGUAGE: English  
 ENTRY DATE: Entered STN: 20 Feb 1996  
 Last Updated on STN: 20 Feb 1996  
 AN 96034762 EMBASE <<LOGINID::20070124>>  
 DN 1996034762  
 TI Gastric emptying, glucose responses, and insulin secretion after a liquid test meal: Effects of exogenous glucagon-like peptide-1 (GLP-1)(7-36) amide in type 2 (noninsulin-dependent) diabetic patients.  
 AU Willms B.; Werner J.; Holst J.J.; Orskov C.; Creutzfeldt W.; Nauck M.A.  
 CS Department of Medicine, Ruhr-University Bochum, Knappschafts-Krankenhaus, In der Schornau 23-25, 44892 Bochum, Germany  
 SO Journal of Clinical Endocrinology and Metabolism, (1996) Vol. 81, No. 1, pp. 327-332. ISSN: 0021-972X CODEN: JCEMAZ  
 CY United States  
 DT Journal; Article  
 FS 003 Endocrinology  
 037 Drug Literature Index

LA English  
SL English  
ED Entered STN: 20 Feb 1996  
Last Updated on STN: 20 Feb 1996

AB The aim of the study was to investigate whether inhibition of gastric emptying of meals plays a role in the mechanism of the blood glucose-lowering action of glucagon-like peptide-1-(7-36) amide [GLP-1-(7-36) amide] in type 2 diabetes. Eight poorly controlled type 2 diabetic patients (age,  $58 \pm 6$  yr; body mass index,  $30.0 \pm 5.2$  kg/m<sup>2</sup>; hemoglobin A(1c),  $10.5 \pm 1.2\%$ ) were studied in the fasting state (plasma glucose,  $11.1 \pm 1.1$  mmol/L). A liquid meal of 400 mL containing 8% amino acids and 50 g sucrose (327 Kcal) was administered at time zero by a nasogastric tube. Gastric volume was determined by a dye dilution technique using phenol red. In randomized order, GLP-1-(7-36) amide (1.2 pmol/kg · min; Saxon Biochemicals) or placebo (0.9% NaCl with 1% human serum albumin) was infused between -30 and 240 min. In the control experiment, gastric emptying was completed within 120 min, and plasma glucose, insulin, C-peptide, GLP-1-(7-36) amide, and glucagon concentrations transiently increased. With exogenous GLP-1-(7-36) amide (plasma level, approx. 70 pmol/L), gastric volume remained constant over the period it was measured (120 min;  $P < 0.0001$  vs. placebo), and plasma glucose fell to normal fasting values ( $5.4 \pm 0.7$  mmol/L) within 3-4 h, whereas insulin was stimulated in most, but not all, patients, and glucagon remained at the basal level or was slightly suppressed. In conclusion, GLP-1-(7-36) amide inhibits gastric emptying in type 2 diabetic patients. Together with the stimulation of insulin and the inhibition of glucagon secretion, this effect probably contributes to the blood glucose-lowering action of GLP-1-(7-36) amide in type 2-diabetic patients when studied after meal ingestion. At the degree observed, inhibition of gastric emptying, however, must be overcome by tachyphylaxis, reduction in dose, or pharmacological interventions so as not to interfere with the therapeutic use of GLP-1-(7-36) amide in type 2 diabetic patients.

CT Medical Descriptors:

\*insulin release  
\*non insulin dependent diabetes mellitus: DT, drug therapy  
\*non insulin dependent diabetes mellitus: TH, therapy  
\*stomach emptying  
adult  
aged  
article  
clinical article  
clinical trial  
controlled study

diabetic angiopathy: CO, complication  
diabetic diet  
diabetic nephropathy: CO, complication  
diabetic neuropathy: CO, complication  
diabetic retinopathy  
drug effect  
drug mechanism  
female  
glucagon release  
glucose blood level  
hormone inhibition  
human  
hypertension: DT, drug therapy  
intravenous drug administration  
male  
postprandial state  
priority journal  
randomized controlled trial  
Drug Descriptors:  
\*glucagon like peptide 1 [7-36] amide: CM, drug comparison  
\*glucagon like peptide 1 [7-36] amide: DT, drug therapy  
\*glucagon like peptide 1 [7-36] amide: PD, pharmacology  
\*glucagon like peptide 1 [7-36] amide: CT, clinical trial  
\*glucose: EC, endogenous compound  
\*insulin: EC, endogenous compound  
acarbose: DT, drug therapy  
captopril plus hydrochlorothiazide: DT, drug therapy  
glibenclamide: DT, drug therapy  
isosorbide dinitrate: DT, drug therapy  
metformin: DT, drug therapy  
metoprolol: DT, drug therapy  
nifedipine: DT, drug therapy  
placebo: CM, drug comparison

RN (glucagon like peptide 1 [7-36] amide) 119637-73-9; (glucose) 50-99-7, 84778-64-3; (insulin) 9004-10-8; (acarbose) 56180-94-0; (glibenclamide) 10238-21-8; (isosorbide dinitrate) 87-33-2; (metformin) 1115-70-4, 657-24-9; (metoprolol) 37350-58-6; (nifedipine) 21829-25-4  
CO Saxon (Germany)

L33 ANSWER 8 OF 9 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

DUPLICATE 2

ACCESSION NUMBER: 1993:408694 BIOSIS <<LOGINID::20070124>>

DOCUMENT NUMBER: PREV199396074419

TITLE: Preserved incretin effect in type 1 diabetic patients with end-stage nephropathy treated by combined

heterotopic pancreas and kidney transplantation.

AUTHOR(S): Nauck, M. A. [Reprint author]; Busing, M.; Orskov, C.; Siegel, E. G.; Talarischik, J.; Baartz, A.; Baartz, T.; Hopt, U. T.; Becker, H.-D.; Creutzfeldt, W.

CORPORATE SOURCE: Div. Gastroenterol. and Endocrinol., Dep. Med., Georg August Univ., Robert-Koch-Strasse 40, W-3400 Goettingen, Germany

SOURCE: Acta Diabetologica, (1993) Vol. 30, No. 1, pp. 39-45.

CODEN: ACDAEZ. ISSN: 0940-5429.

DOCUMENT TYPE: Article

LANGUAGE: English

ENTRY DATE: Entered STN: 8 Sep 1993

Last Updated on STN: 3 Jan 1995

AN 1993:408694 BIOSIS <<LOGINID::20070124>>

DN PREV199396074419

TI Preserved incretin effect in type 1 diabetic patients with end-stage nephropathy treated by combined heterotopic pancreas and kidney transplantation.

AU Nauck, M. A. [Reprint author]; Busing, M.; Orskov, C.; Siegel, E. G.; Talarischik, J.; Baartz, A.; Baartz, T.; Hopt, U. T.; Becker, H.-D.; Creutzfeldt, W.

CS Div. Gastroenterol. and Endocrinol., Dep. Med., Georg August Univ., Robert-Koch-Strasse 40, W-3400 Goettingen, Germany

SO Acta Diabetologica, (1993) Vol. 30, No. 1, pp. 39-45.

CODEN: ACDAEZ. ISSN: 0940-5429.

DT Article

LA English

ED Entered STN: 8 Sep 1993

Last Updated on STN: 3 Jan 1995

AB Insulin secretion is stimulated better by oral than by intravenous glucose (incretin effect). The contribution of the autonomic nervous system to the incretin effect after oral glucose in humans is unclear. We therefore examined nine type 1 diabetic (insulin-dependent) patients with end-stage nephropathy, studied after combined heterotopic pancreas and kidney transplantation, and 7 non-diabetic kidney recipients (matched for creatinine clearance and immunosuppressive medication). The release of gastric inhibitory polypeptide (GIP) and glucagon-like peptide 1 (GLP-1) immunoreactivity and B cell secretory responses (IR insulin and C-peptide) to oral (50 g) and "isoglycaemic" intravenous glucose (identical glycaemic profile) were measured by radioimmunoassay. The difference in B cell responses between the two tests represents the contribution of the enteroinsular axis to the response after oral glucose (incretin effect). Insulin responses after the oral glucose challenge were similar in the two patient groups despite systemic venous drainage of the pancreas graft in the pancreas-kidney-transplanted group. In both

groups GIP and GLP-1 increased after oral but not after intravenous glucose, and B cell secretory responses were significantly smaller (by  $55.2 \pm 7.7\%$  and  $46.5 \pm 12.5\%$ , respectively) with "isoglycaemic" intravenous glucose infusions. The lack of reduction in the incretin effect in pancreas-kidney-transplanted patients, whose functioning pancreas is denervated, indicates a lesser role for the nervous system and a more important contribution of circulating incretin hormones in mediating the enteroinsular axis in man.

CC Biochemistry studies - Proteins, peptides and amino acids 10064

Biochemistry studies - Carbohydrates 10068

Anatomy and Histology - Surgery 11105

Anatomy and Histology - Regeneration and transplantation 11107

Pathology - Therapy 12512

Metabolism - Carbohydrates 13004

Metabolism - Proteins, peptides and amino acids 13012

Metabolism - Metabolic disorders 13020

Digestive system - General and methods 14001

Digestive system - Pathology 14006

Urinary system - General and methods 15501

Urinary system - Pathology 15506

Endocrine - Pancreas 17008

IT Major Concepts

Endocrine System (Chemical Coordination and Homeostasis); Gastroenterology (Human Medicine, Medical Sciences); Metabolism; Physiology; Surgery (Medical Sciences); Urology (Human Medicine, Medical Sciences)

IT Chemicals & Biochemicals

INCRETIN; GLUCAGON; INSULIN

IT Miscellaneous Descriptors

ANTI-DIABETIC-DRUG; DIABETIC NEUROPATHY; ENZYME INHIBITOR-

DRUG

ORGN Classifier

Hominidae 86215

Super Taxa

Primates; Mammalia; Vertebrata; Chordata; Animalia

Organism Name

Hominidae

Taxa Notes

Animals, Chordates, Humans, Mammals, Primates, Vertebrates

RN 54241-84-8 (INCRETIN)

9007-92-5 (GLUCAGON)

9004-10-8 (INSULIN)

L33 ANSWER 9 OF 9 MEDLINE on STN

ACCESSION NUMBER: 92288534 MEDLINE <<LOGINID::20070124>>

DOCUMENT NUMBER: PubMed ID: 1600330

**TITLE:** Basal and nutrient-stimulated pancreatic and gastrointestinal hormone concentrations in type-1-diabetic patients after successful combined pancreas and kidney transplantation.

**AUTHOR:** Nauck M A; Busing M; Orskov C; Siegel E G; Talartschik J; Baartz A; Baartz T; Holzer H; Hopt U T; Ebert R; +

**CORPORATE SOURCE:** Abteilung Gastroenterologie und Endokrinologie, Georg-August-Universität, Göttingen.

**SOURCE:** The Clinical investigator, (1992 Jan) Vol. 70, No. 1, pp. 40-8.  
Journal code: 9207154. ISSN: 0941-0198.

**PUB. COUNTRY:** GERMANY: Germany, Federal Republic of

**DOCUMENT TYPE:** Journal; Article; (JOURNAL ARTICLE)

**LANGUAGE:** English

**FILE SEGMENT:** Priority Journals

**ENTRY MONTH:** 199207

**ENTRY DATE:** Entered STN: 24 Jul 1992  
Last Updated on STN: 24 Jul 1992  
Entered Medline: 13 Jul 1992

**AN** 92288534 **MEDLINE** <<LOGINID::20070124>>

**DN** PubMed ID: 1600330

**TI** Basal and nutrient-stimulated pancreatic and gastrointestinal hormone concentrations in type-1-diabetic patients after successful combined pancreas and kidney transplantation.

**AU** Nauck M A; Busing M; Orskov C; Siegel E G; Talartschik J; Baartz A; Baartz T; Holzer H; Hopt U T; Ebert R; +

**CS** Abteilung Gastroenterologie und Endokrinologie, Georg-August-Universität, Göttingen.

**SO** The Clinical investigator, (1992 Jan) Vol. 70, No. 1, pp. 40-8.  
Journal code: 9207154. ISSN: 0941-0198.

**CY** GERMANY: Germany, Federal Republic of

**DT** Journal; Article; (JOURNAL ARTICLE)

**LA** English

**FS** Priority Journals

**EM** 199207

**ED** Entered STN: 24 Jul 1992  
Last Updated on STN: 24 Jul 1992  
Entered Medline: 13 Jul 1992

**AB** The secretion of pancreatic and gastrointestinal hormones in the basal state and after nutrient stimuli (50 g glucose, 50 g protein, or 30 g triglyceride administered on separate occasions) was assessed in ten previously type-1-diabetic patients after successful combined kidney and pancreas transplantation (systemic venous drainage). Fasting values were compared to matched non-diabetic kidney-transplanted patients and related to kidney function (endogenous creatinine clearance) and to the type and dosage of immunosuppressive medication. In the fasting state, only IR

insulin concentrations were higher in pancreas-kidney-transplanted patients (by 88%;  $P = 0.001$ ) than in the kidney graft recipients. There were significant inverse correlations of plasma C-peptide, GIP, and gastrin immunoreactivity to endogenous creatinine clearance (kidney function). In response to nutrients, insulin secretion (IR insulin, C-peptide) was significantly stimulated by glucose, and - to a lesser degree - also by protein. Pancreatic glucagon was suppressed by glucose and stimulated by protein ingestion. GIP was raised after glucose and triglyceride more than after protein ( $P = 0.0003$ ). GLP-1 immunoreactivity was stimulated by all nutrients, with a tendency towards higher responses to protein and fat ( $P = 0.06$ ). Gastrin was mainly raised by protein. In conclusion, the overall pattern of pancreatic and gastrointestinal hormone release is normal in patients after combined pancreas-kidney-transplantation, but there are some peculiarities due to (a) systemic venous drainage of the pancreas graft (elevated fasting IR insulin) and (b) impaired kidney function (negative correlation of fasting plasma values to endogenous creatinine clearance for C-peptide, GIP, and gastrin). (ABSTRACT TRUNCATED AT 250 WORDS)

**CT** Check Tags: Female; Male  
Adult  
Blood Glucose: ME, metabolism  
Diabetes Mellitus, Type 1: BL, blood  
\*Diabetes Mellitus, Type 1: SU, surgery  
Diabetic Nephropathies: BL, blood  
\*Diabetic Nephropathies: SU, surgery  
\*Gastrointestinal Hormones: BL, blood  
Humans  
Kidney Function Tests  
\*Kidney Transplantation: PH, physiology  
Middle Aged  
\*Pancreas Transplantation: PH, physiology  
Pancreatic Function Tests  
\*Pancreatic Hormones: BL, blood  
Research Support, Non-U.S. Gov't  
**CN** 0 (Blood Glucose); 0 (Gastrointestinal Hormones); 0 (Pancreatic Hormones)

D Ibib all L34 1-9

**L34 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN**  
**ACCESSION NUMBER:** 2004:533962 CAPLUS <<LOGINID::20070124>>  
**DOCUMENT NUMBER:** 141:82335  
**TITLE:** Human glucagon-like-peptide-1 mimics and their antidiabetic effects  
**INVENTOR(S):** Natarajan, Seshia Iyer; Mapelli, Claudio; Bastos, Margarita M.; Bernatowicz, Michael; Lee, Ving; Ewing, William R.

**PATENT ASSIGNEE(S):** USA  
**SOURCE:** U.S. Pat. Appl. Publ., 73 pp., Cont.-in-part of U.S. Ser. No. 273,975.  
**CODEN:** USXXCO  
**DOCUMENT TYPE:** Patent  
**LANGUAGE:** English  
**FAMILY ACC. NUM. COUNT:** 2  
**PATENT INFORMATION:**

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004127423	A1	20040701	US 2003-419399	20030421
US 2003195157	A1	20031016	US 2002-273975	20021018 <-
WO 2004094461	A2	20041104	WO 2004-US12374	20040421
WO 2004094461	A3	20050915		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CL, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

**EP** 1615653 **A2** 20060118 **EP** 2004-760098 20040421  
**R:** AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR

**PRIORITY APPLN. INFO:** US 2001-342015P P 20011018  
US 2002-273975 A2 20021018  
US 2003-419399 A 20030421  
WO 2004-US12374 W 20040421

**AN** 2004:533962 CAPLUS <<LOGINID::20070124>>  
**DN** 141:82335  
**ED** Entered STN: 02 Jul 2004  
**TI** Human glucagon-like-peptide-1 mimics and their antidiabetic effects  
**IN** Natarajan, Seshia Iyer; Mapelli, Claudio; Bastos, Margarita M.; Bernatowicz, Michael; Lee, Ving; Ewing, William R.  
**PA** USA  
**SO** U.S. Pat. Appl. Publ., 73 pp., Cont.-in-part of U.S. Ser. No. 273,975.  
**CODEN:** USXXCO  
**DT** Patent  
**LA** English  
**IC** ICM A61K038-10  
**ICS** C07K007-08

**INCL** 514015000; 530328000

**CC** 1-10 (Pharmacology)  
Section cross-reference(s): 2, 34, 63  
**FAN.CNT** 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2004127423	A1	20040701	US 2003-419399	20030421
US 2003195157	A1	20031016	US 2002-273975	20021018 <-
WO 2004094461	A2	20041104	WO 2004-US12374	20040421
WO 2004094461	A3	20050915		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CL, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

**EP** 1615653 **A2** 20060118 **EP** 2004-760098 20040421  
**R:** AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR

**PRAI** US 2001-342015P P 20011018  
US 2002-273975 A2 20021018  
US 2003-419399 A 20030421  
WO 2004-US12374 W 20040421

**CLASS**  
**PATENT NO.** **CLASS** **PATENT FAMILY CLASSIFICATION CODES**

US 2004127423 ICM A61K038-10  
ICS C07K007-08  
INCL 514015000; 530328000  
IPC A61K0038-10 [ICM,7]; C07K0007-08 [ICS,7]; C07K0007-00 [ICS,7,C\*]  
IPCR A61K0038-00 [N,C\*]; A61K0038-00 [N,A]; C07K0014-435 [L,C\*]; C07K0014-605 [L,A]  
NCL 514/015.000; 530/328.000  
ECLA C07K014/605  
US 2003195157 IPCI A61K0038-10 [ICM,7]; A61K0038-08 [ICS,7]; C07K0007-08 [ICS,7]; C07K0007-06 [ICS,7]; C07K0007-00 [ICS,7,C\*]  
IPCR A61K0038-00 [N,C\*]; A61K0038-00 [N,A]; C07K0014-435 [L,C\*]; C07K0014-605 [L,A]  
NCL 514/016.000; 514/017.000; 530/328.000; 530/329.000  
ECLA C07K014/605

WO 2004094461 IPC1 C07K [ICM,7]  
IPCR A61K0038-00 [LC\*]; A61K0038-00 [LA]; A61K0038-02 [LC\*]; A61K0038-02 [LA]; A61K0038-08 [LC\*]; A61K0038-08 [LA]; A61K0038-10 [LC\*]; A61K0038-10 [LA]; C07K [LS]; C07K0007-00 [LC\*]; C07K0007-02 [LA]; C07K0007-04 [LA]; C07K0007-08 [LA]  
EP 1615653 IPC1 A61K0038-00 [ICM,7]; A61K0038-02 [ICS,7]; A61K0038-10 [ICS,7]; A61K0038-08 [ICS,7]; C07K0007-02 [ICS,7]; C07K0007-04 [ICS,7]; C07K0007-08 [ICS,7]; C07K0007-00 [ICS,7, C\*]  
IPCR A61K0038-00 [LC\*]; A61K0038-00 [LA]; A61K0038-02 [LC\*]; A61K0038-02 [LA]; A61K0038-08 [LC\*]; A61K0038-08 [LA]; A61K0038-10 [LC\*]; A61K0038-10 [LA]; C07K [LS]; C07K0007-00 [LC\*]; C07K0007-02 [LA]; C07K0007-04 [LA]; C07K0007-08 [LA]  
AB The invention discloses human glucagon-like peptide-1 (GLP-1) peptide mimics that mimic the biol. activity of the native GLP-1 peptide and thus are useful for the treatment or prevention of diseases or disorders associated with GLP activity. Further, the invention provides novel, chemical modified peptides that not only stimulate insulin secretion in type II diabetics, but also produce other beneficial insulinotropic responses. These synthetic peptide GLP-1 mimics exhibit increased stability to proteolytic cleavage making them ideal therapeutic candidates for oral or parenteral administration.  
ST human glucagon peptide mimic prepn diabetes antidiabetic insulin stability  
IT Proteins  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(ALBP (adipocyte lipid-binding protein); human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Lipoprotein receptors  
RL: BSU (Biological study, unclassified); BIOL (Biological study) (LDL; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Proteins  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(MTP (microsomal triglyceride-exchanging protein), inhibitors; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Antiarteriosclerotics  
(antiatherosclerotics; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Drug delivery systems  
(capsules; human glucagon-like-peptide-1 mimics and their antidiabetic

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Drug delivery systems  
(injections; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Metabolic disorders  
(metabolic syndrome X; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Drug delivery systems  
(microparticles; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Diabetes mellitus  
(non-insulin-dependent; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Antidiabetic agents  
Drug delivery systems  
(oral; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Drug delivery systems  
(suspensions; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Drug delivery systems  
(tablets; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Peroxisome proliferator-activated receptors  
RL: BSU (Biological study, unclassified); BIOL (Biological study) (a; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Peroxisome proliferator-activated receptors  
RL: BSU (Biological study, unclassified); BIOL (Biological study) (g; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT 51-61-6, Dopamine, biological studies 56-81-5, Glycerol, biological studies 9001-62-1, Lipase 9028-35-7, 3-Hydroxy-3-methylglutaryl CoA reductase 9029-60-1, Lipoxigenase 9033-06-1, Glucosidase 9077-14-9, Squalene synthetase 63551-74-6, Lipoxigenase 90002-36-1, 2-Ethylphenyl boronic acid  
RL: BSU (Biological study, unclassified); BIOL (Biological study) (human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT 516514-32-2P 516514-38-8P 516514-43-5P 516514-47-9P 516514-52-6P 516514-55-9P 516514-58-2P 516514-61-7P 516514-64-0P 516514-68-4P 516514-72-0P 516514-75-3P 516514-78-6P 516514-81-1P 516514-84-4P 516514-87-7P 516514-91-3P 516514-95-7P 516514-99-1P 516515-03-0P 516515-06-3P 516515-09-6P 516515-14-3P 516515-18-7P 516515-22-3P 516515-26-7P 516515-30-3P 516515-34-7P 516515-38-1P 516515-42-7P

effects)  
IT Proteins  
RL: BSU (Biological study, unclassified); BIOL (Biological study) (cholesterol ester-exchanging; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Kidney, disease  
(diabetic nephropathy; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Nerve, disease  
(diabetic neuropathy; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Eye, disease  
(diabetic retinopathy; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Transport proteins  
RL: BSU (Biological study, unclassified); BIOL (Biological study) (dopamine transporter; human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT 5-HT reuptake inhibitors  
Antihypertensives  
Antiobesity agents  
Appetite depressants  
Atherosclerosis  
Diabetes mellitus  
Human  
Hyperglycemia  
Hypertension  
Hypertriglyceridemia  
Hypolipemic agents  
Obesity  
Signal transduction, biological  
Wound healing  
b3-Adrenoceptor agonists  
(human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Fatty acids, biological studies  
Glucagon-like peptide-1 receptors  
Hyperlipidemia  
Thyroid hormone receptors  
RL: BSU (Biological study, unclassified); BIOL (Biological study) (human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Peptides, biological studies  
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT Sulfonylureas

516515-46-1P 516515-50-7P 516515-55-2P 516515-59-6P 516515-63-2P 516515-68-7P 516515-72-3P 516515-76-7P 516515-80-3P 516515-84-7P 516515-88-1P 516515-92-7P 516515-96-1P 516516-01-1P 516516-06-6P 516516-10-2P 516516-14-6P 516516-18-0P 516516-22-6P 516516-26-0P 516516-31-7P 516516-35-1P 516516-39-5P 516516-44-2P 516516-50-0P 516516-55-5P 516516-60-2P 516516-64-6P 516516-68-0P 516516-72-6P 516516-76-0P 516516-80-6P 516516-85-1P 516516-87-3P 516516-91-9P 516516-95-3P 516516-98-6P 516517-02-5P 516517-06-9P 516517-10-5P 516517-14-9P 516517-17-2P 516517-22-9P 516517-26-3P 516517-30-9P 516517-33-2P 516517-37-6P 516517-41-2P 516517-45-6P 516517-50-3P 516517-54-7P 516517-59-2P 516517-63-8P 516517-67-2P 516517-71-8P 516517-75-2P 516517-79-6P 516517-82-1P 516517-85-4P 516517-88-7P 516517-91-2P 516517-96-7P 516518-00-6P 516518-04-0P 516518-08-4P 516518-11-9P 516518-15-3P 516518-19-7P 516518-22-2P 516518-26-6P 516518-30-2P 516518-33-5P 516518-35-7P 516518-39-1P 516518-42-6P 516518-46-0P 516518-48-2P 516518-51-7P 516518-54-0P 516518-57-3P 516518-59-5P 516518-61-9P 516518-64-2P 516518-66-4P 516518-69-7P 516518-73-3P 516518-78-8P 516518-83-5P 516518-88-0P 516518-92-6P 516518-96-0P 516519-00-9P 516519-04-3P 516519-09-8P 516519-12-3P 516519-15-6P 516519-18-9P 516519-21-4P 516519-24-7P 516519-27-0P 516519-32-7P 516519-37-2P 516519-40-7P 516519-45-2P 516519-50-9P 516519-54-3P 516519-59-8P 516519-63-4P 516519-67-8P 516519-72-5P 516519-77-0P 516519-82-7P 516519-87-2P 516519-91-8P 516519-95-2P 516519-99-6P 516520-03-9P 516520-09-5P 516520-13-1P 516520-17-5P 516520-22-2P 516520-26-6P 516520-29-9P 516520-33-5P 516520-36-8P 516520-39-1P 516520-42-6P 516520-45-9P 516520-47-1P 516520-49-3P 516520-52-8P 516520-54-0P 516520-55-1P 516520-57-3P 516520-59-5P 516520-61-9P 516520-63-1P 516520-66-4P 516520-68-6P 516520-70-0P 516520-72-2P 516520-74-4P 516520-75-5P 516520-77-7P 516520-79-9P 516520-81-3P 516520-82-4P 516520-84-6P 516520-86-8P 516520-87-9P 516520-89-1P 516520-91-5P 516520-93-7P 516520-95-9P 516520-97-1P 516520-99-3P 516521-01-0P 516521-03-2P 516521-05-4P 516521-07-6P 516521-08-7P 516521-09-8P 516521-10-1P 516521-12-3P 516521-13-4P 516521-14-5P 516521-16-7P 516521-18-9P 516521-19-0P 516521-21-4P 516521-22-5P 516521-23-6P 516521-24-7P 516521-25-8P 516521-26-9P 516521-27-0P 516521-28-1P 516521-29-2P 516521-30-5P 516521-31-6P 516521-32-7P 516521-33-8P 516521-34-9P 516521-35-0P 516521-36-1P 516521-37-2P 516521-38-3P 516521-39-4P 516521-40-7P 516521-41-8P 516521-42-9P 516521-43-0P 516521-44-1P 516521-45-2P 516521-53-2P 516521-54-3P 516521-55-4P 513497-71-3P 513497-72-4P 513497-73-5P 513497-74-6P 513497-75-7P 513497-77-9P  
RL: PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT 713497-79-1P 713497-81-5P 713497-83-7P 713497-85-9P



RL: PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(human glucagon-like-peptide-1 mimics and their antidiabetic effects)  
IT 51-64-9, Dexamphet-amine 56-03-1, Biguanide 94-20-2, Chloropropamide 122-09-8, Phentermine 637-07-0, Clofibrate 657-24-9, Metformin: 943-45-3D, Fibrin acid, derivs. 10238-21-8, Glyburide 14838-15-4, Phenylpropanolamine 21187-98-4, Glucagon 22232-71-9, Mazindol 25812-30-0, Gemfibrozil 29094-61-9, Glipizide 49562-28-9, Fenofibrate 54870-28-9, Meglitinide 56180-94-0, Acarbose 72432-03-2, Miglitol 75330-75-5, Lovastatin 79902-63-9, Simvastatin 81093-37-0, Pravastatin 89750-14-1, Glucagon-like peptide 1 93479-97-1, Glimepiride 93957-54-1, Fluvastatin 96829-58-2, Orlistat 97240-79-4, Topiramate 97322-87-7, Troglitazone 105816-04-4, Nateglinide 106650-56-0, Sibutramine 111025-46-8, Pioglitazone 122320-73-4, Rosiglitazone 134523-00-5, Atorvastatin 135062-02-1, Repaglinide 141750-63-2, Nisvastatin 141758-74-9, AC2993 144288-97-1, TS-962 145599-86-6, Cerivastatin 152755-31-2, LY295427 159183-92-3, L750355 161600-01-7, Isaglitazone 166518-60-1, Avasimibe 170861-63-9, JTT-501 176435-10-2, LY315902 178759-95-0, MD 700 196808-45-4 199113-98-9, NN-2344 199914-96-0, YM-440 213252-19-8, KRP297 244081-42-3, AJ9677 258345-41-4, GW-409544 262352-17-0, CP 529414 282526-98-1, ATL-962 287714-41-4 335149-08-1, L895645 335149-14-9, R-119702 335149-15-0, KAD1129 335149-17-2, AR-HO39242 335149-23-0, NVP-DPP-728A 335149-25-2, CP331648 430433-17-3, Glipyrside 444069-80-1, Axokine  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(human glucagon-like-peptide-1 mimics and their antidiabetic effects)

IT 150-46-9, Triethylborate 358-23-6, Triflic anhydride 1973-22-4,

1-Bromo-2-ethylbenzene 4326-36-7 16419-60-6, O-Tolylboronic acid

82911-69-1 93267-04-0 516521-49-6 713497-86-0

RL: RCT (Reactant); RACT (Reactant or reagent)

(human glucagon-like-peptide-1 mimics and their antidiabetic effects)

IT 112766-18-4P 516521-46-3P 516521-47-4P 516521-48-5P 516521-50-9P

516521-51-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(human glucagon-like-peptide-1 mimics and their antidiabetic effects)

IT 713497-87-1P 713497-88-2P

LA English

IC ICM C07D495-04

ICS C07D491-04; C07D209-52; A61K031-407; A61P003-10; A61P009-10;

C07D495-14; C07D333-00; C07D209-00; C07D307-00

CC 28-2 (Heterocyclic Compounds (More Than One Hetero Atom))

Section cross-reference(s): 1, 63

FAN.CNT 2

PATENT NO. KIND DATE APPLICATION NO. DATE

PI EP 1391460 A1 20040225 EP 2003-20676 20000918

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,

IE, FI, CY

EP 1088824 A2 20010404 EP 2000-308131 20000918 <--

EP 1088824 A3 20010627

EP 1088824 B1 20040107

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,

IE, SI, LT, LV, FI, RO

US 2002183369 A1 20021205 US 2002-117370 20020405 <--

US 6576653 B2 20030610

US 2003195361 A1 20031016 US 2003-367002 20030214 <--

US 6828343 B2 20041207

PRAI US 1999-157148P P 19990930

EP 2000-308131 A3 20000918

US 2000-670759 A3 20000927

US 2002-117370 A3 20020405

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

EP 1391460 ICM C07D495-04

ICS C07D491-04; C07D209-52; A61K031-407; A61P003-10;

A61P009-10; C07D495-14; C07D333-00; C07D209-00;

C07D307-00

IPCI C07D0495-04 [ICM,7]; C07D0491-04 [ICS,7]; C07D0491-00

[ICS,7,C\*]; C07D0209-52 [ICS,7]; A61K031-407 [ICS,7];

A61P0003-10 [ICS,7]; A61P0003-00 [ICS,7,C\*];

A61P0009-10 [ICS,7]; A61P0009-00 [ICS,7,C\*];

C07D0495-14 [ICS,7]; C07D0495-00 [ICS,7,C\*];

C07D0333-00 [ICS,7]; C07D0209-00 [ICS,7]; C07D0307-00

[ICS,7]

ECLA C07D491/04+307B+209B; C07D495/04+333B+209B;

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(inhibitors; human glucagon-like-peptide-1 mimics and their antidiabetic effects)

IT 9004-10-8, Insulin, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(resistance, hyperinsulinemia; human glucagon-like-peptide-1 mimics and their antidiabetic effects)

L34 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:157498 CAPLUS <<LOGINID::20070124>>

DOCUMENT NUMBER: 140:199313

TITLE: Preparation of fused pyrrolylcarboxamides as glycogen

phosphorylase inhibitors

INVENTOR(S): Daisy, Joe

PATENT ASSIGNEE(S): Pfizer Products Inc., USA

SOURCE: Eur. Pat. Appl., 71 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE

EP 1391460 A1 20040225 EP 2003-20676 20000918

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,

IE, FI, CY

EP 1088824 A2 20010404 EP 2000-308131 20000918 <--

EP 1088824 A3 20010627

EP 1088824 B1 20040107

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,

IE, SI, LT, LV, FI, RO

US 2002183369 A1 20021205 US 2002-117370 20020405 <--

US 6576653 B2 20030610

US 2003195361 A1 20031016 US 2003-367002 20030214 <--

US 6828343 B2 20041207

PRIORITY APPLN. INFO.: US 1999-157148P P 19990930

EP 2000-308131 A3 20000918

US 2000-670759 A3 20000927

US 2002-117370 A3 20020405

OTHER SOURCE(S): MARPAT 140:199313

AN 2004:157498 CAPLUS <<LOGINID::20070124>>

DN 140:199313

ED Entered STN: 26 Feb 2004

TI Preparation of fused pyrrolylcarboxamides as glycogen phosphorylase

inhibitors

IN Daisy, Joe

PA Pfizer Products Inc., USA

SO Eur. Pat. Appl., 71 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM C07D495-04

ICS C07D491-04; C07D209-52; A61K031-407; A61P003-10; A61P009-10;

C07D495-14; C07D333-00; C07D209-00; C07D307-00

CC 28-2 (Heterocyclic Compounds (More Than One Hetero Atom))

Section cross-reference(s): 1, 63

FAN.CNT 2

PATENT NO. KIND DATE APPLICATION NO. DATE

PI EP 1391460 A1 20040225 EP 2003-20676 20000918

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,

IE, FI, CY

EP 1088824 A2 20010404 EP 2000-308131 20000918 <--

EP 1088824 A3 20010627

EP 1088824 B1 20040107

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,

IE, SI, LT, LV, FI, RO

US 2002183369 A1 20021205 US 2002-117370 20020405 <--

US 6576653 B2 20030610

US 2003195361 A1 20031016 US 2003-367002 20030214 <--

US 6828343 B2 20041207

PRAI US 1999-157148P P 19990930

EP 2000-308131 A3 20000918

US 2000-670759 A3 20000927

US 2002-117370 A3 20020405

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

EP 1391460 ICM C07D495-04

ICS C07D491-04; C07D209-52; A61K031-407; A61P003-10;

A61P009-10; C07D495-14; C07D333-00; C07D209-00;

C07D307-00

IPCI C07D0495-04 [ICM,7]; C07D0491-04 [ICS,7]; C07D0491-00

[ICS,7,C\*]; C07D0209-52 [ICS,7]; A61K031-407 [ICS,7];

A61P0003-10 [ICS,7]; A61P0003-00 [ICS,7,C\*];

A61P0009-10 [ICS,7]; A61P0009-00 [ICS,7,C\*];

C07D0495-14 [ICS,7]; C07D0495-00 [ICS,7,C\*];

C07D0333-00 [ICS,7]; C07D0209-00 [ICS,7]; C07D0307-00

[ICS,7]

ECLA C07D491/04+307B+209B; C07D495/04+333B+209B;

C07D495/14+333B+333B+209B

EP 1088824 IPCI C07D0495-04 [ICM,6]; C07D0491-04 [ICS,6]; C07D0209-52

[ICS,6]; A61K0031-407 [ICS,6]; A61P0003-10 [ICS,6];

A61P0003-00 [ICS,6,C\*]; A61P0009-10 [ICS,6];

A61P0009-00 [ICS,6,C\*]; C07D0495-04 [ICL,6];

C07D0495-00 [ICL,6,C\*]; C07D0333-00 [ICL,6];

C07D0209-00 [ICL,6]; C07D0491-04 [ICL,6]; C07D0491-00

[ICL,6,C\*]; C07D0307-00 [ICL,6]; C07D0209-00 [ICL,6]

IPCR C07D0491-048 [LA]; A61K0031-407 [IC\*]; A61K0031-407

[LA]; A61K0031-427 [IC\*]; A61K0031-427 [LA];

A61K0031-4523 [IC\*]; A61K0031-454 [LA]; A61K0031-5375

[IC\*]; A61K0031-5377 [LA]; A61K0031-695 [IC\*];

A61K0031-695 [LA]; A61K0038-00 [IC\*]; A61K0038-00

[LA]; A61K0045-00 [IC\*]; A61K0045-00 [LA];

A61P0003-00 [IC\*]; A61P0003-06 [LA]; A61P0003-10

[LA]; A61P0009-00 [IC\*]; A61P0009-10 [LA];

A61P0009-12 [LA]; A61P0027-00 [IC\*]; A61P0027-12

[LA]; A61P0043-00 [IC\*]; A61P0043-00 [LA];

C07D0209-00 [IC\*]; C07D0209-52 [LA]; C07D0491-00

[IC\*]; C07D0491-04 [LA]; C07D0495-00 [IC\*];

C07D0495-04 [LA]; C07D0495-14 [LA]; C07F0007-00

[IC\*]; C07F0007-10 [LA]; C07K0005-00 [IC\*];

C07K0005-00 [LA]

ECLA C07D209/52; C07D491/04+307B+209B; C07D495/04+333B+209B

US 2002183369 IPCI C07D0513-22 [ICM,7]; C07D0513-00 [ICM,7,C\*];

A61K0031-429 [ICS,7]; A61K0031-424 [ICS,7];

A61K0031-4188 [ICS,7]; A61K0031-4164 [ICS,7,C\*]

IPCR C07D0209-00 [IC\*]; C07D0209-52 [LA]; C07D0491-00

[IC\*]; C07D0491-04 [LA]; C07D0495-00 [IC\*];

C07D0495-04 [LA]

NCL 514/367.000; 514/375.000; 514/393.000; 514/412.000;

548/153.000; 548/217.000; 548/303.100; 548/453.000

ECLA C07D209/52; C07D491/04+307B+209B; C07D495/04+333B+209B

US 2003195361 IPCI C07D0513-12 [ICM,7]; C07D0498-02 [ICS,7]; C07D0498-00

[ICS,7,C\*]; C07D0513-02 [ICS,7]; C07D0513-00

[ICS,7,C\*]; C07D0487-02 [ICS,7]; C07D0487-00 [ICS,7,C\*]

IPCR C07D0209-00 [IC\*]; C07D0209-52 [LA]; C07D0491-00

[IC\*]; C07D0491-04 [LA]; C07D0495-00 [IC\*];

C07D0495-04 [LA]

NCL 548/153.000; 548/218.000; 548/303.100; 548/453.000

ECLA C07D209/52; C07D491/04+307B+209B; C07D495/04+333B+209B

OS MARPAT 140:199313

GI

AB Title compds. [I; Q = substituted aryl, heteroaryl; Z, X = C, CH, CH<sub>2</sub>, N, O, S; X1 = N<sub>R</sub>A, CH<sub>2</sub>, O, S; dotted lines = bond, null; both dotted lines are not simultaneously bonds; R1 = H, halo, alkoxy, alkylthio, alkyl, CF<sub>3</sub>, NH<sub>2</sub>, alkylamino, dialkylamino, NO<sub>2</sub>, CN, CO<sub>2</sub>H, carboxyalkyl, alkenyl, alkynyl; R<sub>a</sub>, R<sub>b</sub> = H, alkyl; Y = CH(OH), null; R<sub>2</sub>R<sub>3</sub> = atoms to form a 5-6 membered ring containing 0-3 heteroatoms and 0-2 double bonds; R<sub>4</sub> = CO<sub>2</sub>A; A = NR<sub>d</sub>R<sub>d</sub>, NR<sub>a</sub>CH<sub>2</sub>CH<sub>2</sub>OR<sub>a</sub>, N-heterocyclyl; R<sub>d</sub> = H, alkyl, alkoxy, aryl, (substituted) aryl, heteroaryl; R<sub>c</sub> = H, CO<sub>2</sub>R<sub>a</sub>, OR<sub>a</sub>, SR<sub>a</sub>, NR<sub>a</sub>R<sub>a</sub>; n = 1-3], were prepared for treatment of diabetes, insulin resistance, diabetic neuropathy, diabetic nephropathy, diabetic retinopathy, cataracts, hyperglycemia, hypercholesterolemia, hypertension, hyperinsulinemia, hyperlipidemia, atherosclerosis, or tissue ischemia (no data). Thus, 6H-thieno[2,3-b]pyrrole-5-carboxylic acid and (3S)-amino-1-((3R,4S)-dihydroxypyrrolidin-1-yl)-(2R)-hydroxy-4-phenylbutan-1-one were coupled using 4-(dimethylamino)pyridine, 1-hydroxybenzotriazole hydrate and 1-(3-dimethylaminopropyl)-3-ethylcarbodiimide hydrochloride in CH<sub>2</sub>Cl<sub>2</sub>/DMF to give 6H-thieno[2,3-b]pyrrole-5-carboxylic acid [(1S)-benzyl-3-(3R,4S)-dihydroxypyrrolidin-1-yl)-(2R)-hydroxy-3-oxopropyl]amide.

ST pyrrolylcarboxamide fused prepn glycogen phosphorylase inhibitor; thienopyrrolylcarboxamide prepn antidiabetic; diabetes insulin resistance diabetic neuropathy treatment fused pyrrolylcarboxamide; diabetic nephropathy retinopathy cataract hyperglycemia hypercholesterolemia hypertension treatment pyrrolylcarboxamide; hyperinsulinemia hyperlipidemia atherosclerosis tissue ischemia treatment fused pyrrolylcarboxamide

IT Ischemia  
(cardiac, treatment; preparation of fused pyrrolylcarboxamides as glycogen phosphorylase inhibitors)

IT Antiobesity agents  
a2-Adrenoceptor antagonists  
b-Adrenoceptor agonists  
(coadministration; preparation of fused pyrrolylcarboxamides as glycogen phosphorylase inhibitors)

IT Sulfonyleureas  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(coadministration; preparation of fused pyrrolylcarboxamides as glycogen phosphorylase inhibitors)

IT Kidney, disease  
(diabetic nephropathy, treatment; preparation of fused pyrrolylcarboxamides as glycogen phosphorylase inhibitors)

IT Nerve, disease  
(diabetic neuropathy, treatment; preparation of fused pyrrolylcarboxamides as glycogen phosphorylase inhibitors)

1156-19-0, Tolazamide 2295-31-0D, Thiazolidinedione, derivs.  
7440-62-2D, Vanadium, complexes 9004-10-8, Insulin, biological studies  
9004-10-8D, Insulin, analogs 10238-21-8, Glibenclamide 12179-36-1D,  
Pervanadyl (VO(O<sub>2</sub>)<sup>+</sup>), complexes 23602-78-0, Benfluorex 28299-33-4D,  
Imidazole, derivs. 29094-61-9, Glipizide 37353-31-4, Vanadate  
51037-30-0, Acipimox 51110-01-1D, Somatostatin, analogs 54870-28-9,  
Meglitinide 56180-94-0, Acarbose 66529-17-7, Midaglizole 72432-03-2,  
Miglitol 74772-77-3, Ciglitazone 75358-37-1, Linoglitride 79944-58-4,  
Idazoxan 80879-63-6, Emiglitate 83480-29-9, Voglibose 86615-96-5,  
BRL35135 88431-47-4, Clomoxir 89197-32-0, Efaroxan 90505-66-1, Ro  
16-8714 90730-96-4, BRL37344 93479-97-1, Glimepiride 97322-87-7,  
Trogilazone 104343-33-1, MDL-25637 105182-45-4, Fluparoxan  
105816-04-4, Nateglinide 106612-94-6, Human GLP-1  
-(7-37) 107444-51-9, Rat GLP-1-(7-36)amide 109229-58-5, Englitazone  
110605-64-6, Isaglidole 111025-46-8, Fioglitazone 115656-32-1, D 7114  
122320-73-4, Rosiglitazone 122575-28-4, Naglivan 122830-14-2,  
Deriglidole 124083-20-1, Etomoxir 127214-23-7, Camiglibose  
130714-47-5, WAG 994 133107-64-9, Insulin lispro 135062-02-1,  
Repaglinide 138908-40-4, CL 316243 141200-24-0, Darglitazone  
141758-74-9, AC2993 187887-46-3, Symlin 395214-16-1  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(coadministration; preparation of fused pyrrolylcarboxamides as glycogen phosphorylase inhibitors)

IT 9001-42-7, a-Glucosidase 9025-82-5, Phosphodiesterase  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(inhibitors coadministration; preparation of fused pyrrolylcarboxamides as glycogen phosphorylase inhibitors)

IT 9035-74-9, Glycogen phosphorylase  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(inhibitors; preparation of fused pyrrolylcarboxamides as glycogen phosphorylase inhibitors)

IT 332098-11-0P 332098-12-1P 332098-13-2P 332098-14-3P 332098-15-4P  
332098-16-5P 332098-17-6P 332098-18-7P 332098-19-8P 332098-20-1P  
332098-21-2P 332098-22-3P 332098-23-4P 332098-24-5P 332098-25-6P  
332098-26-7P 332098-27-8P 332098-28-9P 332098-29-0P 332098-30-3P  
332098-31-4P 332098-32-5P 332098-33-6P 332098-34-7P 332098-35-8P  
332098-36-9P 332098-37-0P 332098-38-1P 332098-39-2P 332098-40-5P  
332098-41-6P 332098-42-7P 332098-43-8P 332098-44-9P 332098-45-0P  
332098-46-1P 332098-47-2P 332098-48-3P 332098-49-4P 332098-50-7P  
332098-52-9P 332098-54-1P 332098-55-2P 332098-57-4P 332098-59-6P  
332098-61-0P 332098-63-2P 332098-65-4P  
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU  
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES  
(Uses)  
(preparation of fused pyrrolylcarboxamides as glycogen phosphorylase inhibitors)

IT Eye, disease  
(diabetic retinopathy, treatment; preparation of fused pyrrolylcarboxamides as glycogen phosphorylase inhibitors)

IT Antioxidants  
(fatty acid oxidation inhibitors coadministration; preparation of fused pyrrolylcarboxamides as glycogen phosphorylase inhibitors)

IT Gluconeogenesis  
(inhibitors coadministration; preparation of fused pyrrolylcarboxamides as glycogen phosphorylase inhibitors)

IT Heart, disease  
(ischemia, treatment; preparation of fused pyrrolylcarboxamides as glycogen phosphorylase inhibitors)

IT Anti-ischemic agents  
Anticholesteremic agents  
Antidiabetic agents  
Antihypertensives  
Drug delivery systems  
Human  
Hypolipemic agents  
(preparation of fused pyrrolylcarboxamides as glycogen phosphorylase inhibitors)

IT Atherosclerosis  
Cataract  
Diabetes mellitus  
Hypercholesterolemia  
Hyperglycemia  
Hypertension  
Hypertriglyceridemia  
Ischemia  
(treatment; preparation of fused pyrrolylcarboxamides as glycogen phosphorylase inhibitors)

IT Hyperlipidemia  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(treatment; preparation of fused pyrrolylcarboxamides as glycogen phosphorylase inhibitors)

IT Peroxisome proliferator-activated receptors  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(g, PPAR-g agonists coadministration; preparation of fused pyrrolylcarboxamides as glycogen phosphorylase inhibitors)

IT 9007-92-5, Glucagon, biological studies 106602-62-4, Amylin  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(antagonists coadministration; preparation of fused pyrrolylcarboxamides as glycogen phosphorylase inhibitors)

IT 56-03-1D, Biguanide, derivs. 64-77-7, Tolbutamide 94-20-2,  
Chlorpropamide 114-86-3, Phenformin 458-24-2, Fenfluramine  
657-24-9, Metformin 692-13-7, Buformin 968-81-0, Acetohexamide

IT 637-81-0, Azidoacetic acid ethyl ester 1066-54-2,  
(Trimethylsilyl)acetylene 1126-09-6, Piperidine-4-carboxylic acid ethyl ester 4530-18-1, Boc-DL-Phenylalanine 6030-36-0, 4-Methylthiophene-2-carboxaldehyde 7283-96-7, 5-Chlorothiophene-2-carboxaldehyde 13679-70-4, 5-Methyl-2-thiophenecarboxaldehyde 13734-34-4, Boc-L-Phenylalanine 14345-97-2, 2-Chloro-3-methylthiophene 17186-57-1 18791-75-8, 4-Bromothiophene-2-carboxaldehyde 21508-19-0, 5-Chlorofuran-2-carboxaldehyde 21921-76-6, 4-Bromo-2-furaldehyde 24445-35-0 29669-49-6, 5-Fluorothiophene-2-carboxaldehyde 31486-85-8, Thieno[2,3-b]thiophene-2-carboxaldehyde 35357-56-3, 6H-Thieno[2,3-b]pyrrole-5-carboxylic acid ethyl ester 39793-31-2, 4H-Thieno[3,2-b]pyrrole-5-carboxylic acid 51856-25-8, 6H-Thieno[2,3-b]pyrrole-5-carboxylic acid 51856-29-2, 2-Formyl-6H-thieno[2,3-b]pyrrole-5-carboxylic acid ethyl ester 57500-51-3, 4-Chlorothiophene-2-carboxaldehyde 58963-45-4, 2-Formyl-6H-thieno[2,3-b]pyrrole-5-carboxylic acid 59958-27-9, 2-Formyl-4H-thieno[3,2-b]pyrrole-5-carboxylic acid ethyl ester 62023-60-3, (2R,3S)-3-Benzoyloxycarbonylamino-2-hydroxy-4-phenylbutyric acid 80709-80-4, 2-Methyl-4H-furo[3,2-b]pyrrole-5-carboxylic acid 80709-83-7, 2-Bromo-4H-furo[3,2-b]pyrrole-5-carboxylic acid ethyl ester 91545-55-0, 2-Bromo-6H-thieno[2,3-b]pyrrole-5-carboxylic acid ethyl ester 105181-72-4, (2R,3S)-3-tert-Butoxycarbonylamino-2-hydroxy-4-phenylbutyric acid 153548-49-3 164667-45-2, 2-Formyl-4H-furo[3,2-b]pyrrole-5-carboxylic acid 186431-46-9 186432-05-3 238749-50-3, 2-Bromo-4H-thieno[3,2-b]pyrrole-5-carboxylic acid ethyl ester 519188-80-8  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of fused pyrrolylcarboxamides as glycogen phosphorylase inhibitors)

IT 65782-04-9P, 5-Chloro-4-methylthiophene-2-carboxaldehyde 238749-54-7P, 2-Methyl-4H-thieno[3,2-b]pyrrole-5-carboxylic acid ethyl ester 332098-79-0P 332098-81-4P 332098-83-6P, 2-Bromo-6H-thieno[2,3-b]pyrrole-5-carboxylic acid 332098-85-8P, 2-Methyl-6H-thieno[2,3-b]pyrrole-5-carboxylic acid ethyl ester 332098-87-0P, 2-Methyl-6H-thieno[2,3-b]pyrrole-5-carboxylic acid 332098-89-2P 332098-91-6P 332098-93-8P 332098-95-0P 332098-97-2P 332098-99-4P 332099-01-1P, 2-Chloro-6H-thieno[3,2-b]pyrrole-5-carboxylic acid ethyl ester 332099-03-3P, 2-Chloro-6H-thieno[2,3-b]pyrrole-5-carboxylic acid 332099-05-5P, 2,4-Dichloro-6H-thieno[2,3-b]pyrrole-5-carboxylic acid ethyl ester 332099-07-7P, 2,4-Dichloro-6H-thieno[2,3-b]pyrrole-5-carboxylic acid 332099-09-9P, 2-Bromo-4H-thieno[3,2-b]pyrrole-5-carboxylic acid 332099-11-3P, 2-Bromo-4H-furo[3,2-b]pyrrole-5-carboxylic acid 332099-14-6P, 2-Methyl-4H-thieno[3,2-b]pyrrole-5-carboxylic acid 332099-16-8P, 2-Cyano-6H-thieno[2,3-b]pyrrole-5-carboxylic acid 332099-18-0P 332099-20-4P 332099-22-6P, 2-Fluoro-4H-thieno[3,2-b]pyrrole-5-carboxylic acid ethyl ester 332099-24-8P, 2-Fluoro-4H-thieno[3,2-b]pyrrole-5-carboxylic acid 332099-26-0P,

2-Cyano-4H-furo[3,2-b]pyrrole-5-carboxylic acid 332099-28-2P,  
2-Chloro-4H-furo[3,2-b]pyrrole-5-carboxylic acid ethyl ester  
332099-29-3P, 2-Chloro-4H-furo[3,2-b]pyrrole-5-carboxylic acid  
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ester 332099-36-2P, 3-Bromo-4H-thieno[3,2-b]pyrrole-5-carboxylic acid  
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ester 332099-40-8P, 2-Chloro-4H-thieno[3,2-b]pyrrole-5-carboxylic acid  
332099-42-0P, 3-Methyl-4H-thieno[3,2-b]pyrrole-5-carboxylic acid ethyl  
ester 332099-44-2P, 3-Methyl-4H-thieno[3,2-b]pyrrole-5-carboxylic acid  
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332099-48-6P, 2-Cyano-4H-thieno[3,2-b]pyrrole-5-carboxylic acid  
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332099-54-4P 332099-55-5P 332099-56-6P, 2-Chloro-3-methyl-4H-  
thieno[3,2-b]pyrrole-5-carboxylic acid ethyl ester 332099-58-8P,  
2-Chloro-3-methyl-4H-thieno[3,2-b]pyrrole-5-carboxylic acid 332099-60-2P  
332099-62-4P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation of fused pyrrolylcarboxamides as glycogen phosphorylase  
inhibitors)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS  
RECORD

- RE  
(1) Esteve, L; ES 2081747 A 1996 CAPLUS  
(2) Hitzel, V; US 4325963 A 1982 CAPLUS  
(3) Pfizer; EP 0846464 A 1998 CAPLUS

L34 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2003:570833 CAPLUS <<LOGINID::20070124>>  
DOCUMENT NUMBER: 139:111682  
TITLE: Combined use of a GLP-1 compound  
and a modulator of diabetic late complications  
INVENTOR(S): Knudsen, Lotte Bjerre; Selmer, Johan  
PATENT ASSIGNEE(S): Novo Nordisk A/S, Den.  
SOURCE: PCT Int. Appl., 22 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 2003144206 A1 20030731 US 2002-328282 20021223 <--  
PRAI DK 2001-1969 A 20011229  
DK 2002-760 A 20020517  
DK 2001-969 A 20011229  
US 2002-350087P P 20020117  
WO 2002-DK888 W 20021220

#### CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

WO 2003059372 ICM A61K038-00  
IPCI A61K038-00 [ICM,7]  
IPCR A61K0045-00 [LC\*]; A61K0045-00 [LA]; A61K0031-138  
[LC\*]; A61K0031-138 [LA]; A61K0031-165 [LC\*];  
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A61P0027-00 [LC\*]; A61P0027-02 [LA]; A61P0043-00  
[LC\*]; A61P0043-00 [LA]  
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WO 2003059372 A2 20030724 WO 2002-DK888 20021220 <--  
WO 2003059372 A3 20040325  
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,  
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GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
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EP 1461070 A2 20040929 EP 2002-787467 20021220  
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JP 2005516968 T 20050609 JP 2003-559533 20021220  
US 2003144206 A1 20030731 US 2002-328282 20021223 <--  
PRIORITY APPLN. INFO.: DK 2001-1969 A 20011229  
DK 2002-760 A 20020517  
DK 2001-969 A 20011229  
US 2002-350087P P 20020117  
WO 2002-DK888 W 20021220

AN 2003:570833 CAPLUS <<LOGINID::20070124>>  
DN 139:111682  
ED Entered STN: 25 Jul 2003  
TI Combined use of a GLP-1 compound and a modulator of  
diabetic late complications  
IN Knudsen, Lotte Bjerre; Selmer, Johan  
PA Novo Nordisk A/S, Den.  
SO PCT Int. Appl., 22 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
IC ICM A61K038-00  
CC 1-10 (Pharmacology)  
Section cross-reference(s): 2, 63  
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2003059372	A2	20030724	WO 2002-DK888	20021220 <--
WO 2003059372	A3	20040325		
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[LA]; A61K0031-21 [LC\*]; A61K0031-216 [LA];  
A61K0031-35 [LC\*]; A61K0031-35 [LA]; A61K0031-401  
[LC\*]; A61K0031-401 [LA]; A61K0031-403 [LC\*];  
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[LC\*]; A61K0031-407 [LA]; A61K0031-4164 [LC\*];  
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[LA]; A61K0031-4196 [LC\*]; A61K0031-4196 [LA];  
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[LC\*]; A61K0031-5377 [LA]; A61K0031-55 [LC\*];  
A61K0031-55 [LA]; A61K0038-00 [LC\*]; A61K0038-00  
[LA]; A61K0038-26 [LC\*]; A61K0038-26 [LA];  
A61P0003-00 [LC\*]; A61P0003-10 [LA]; A61P0009-00  
[LC\*]; A61P0009-10 [LA]; A61P0009-12 [LA];  
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EP 1461070 IPCI A61K038-00 [ICM,7]; A61K0031-35 [ICS,7]; A61P0003-10  
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4C086/GA07; 4C086/GA10; 4C086/GA12; 4C086/MA02;  
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4C086/NA05; 4C086/NA06; 4C086/ZA02; 4C086/ZA26;  
4C086/ZA33; 4C086/ZA36; 4C086/ZA42; 4C086/ZA81;  
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4C206/GA01; 4C206/GA31; 4C206/GA01; 4C206/MA02;  
4C206/MA04; 4C206/MA11; 4C206/MA72; 4C206/MA75;  
4C206/NA05; 4C206/NA06; 4C206/ZA02; 4C206/ZA26;

4C206/ZA33; 4C206/ZA36; 4C206/ZA42; 4C206/ZA81;  
4C206/ZC20; 4C206/ZC35; 4C206/ZC42  
US 2003144206 IPC1 A61K0038-26 [ICM,7]; A61K0031-401 [ICS,7]  
IPCR A61K0031-401 [LC\*]; A61K0031-401 [LA]; A61K0038-26  
[LC\*]; A61K0038-26 [LA]  
NCL 514/012.000; 514/423.000  
AB Methods and uses for treatment of diabetic late complications comprising  
administration of a GLP-1 compound and a modulator of  
diabetic complications.  
ST GLP1 diabetes late complication therapy; glucagon like peptide 1  
analog fragment antidiabetic  
IT Angiotensin receptor antagonists  
Antihypertensives  
Human  
Hypertension  
Protein sequences  
b-Adrenoceptor antagonists  
b1-Adrenoceptor antagonists  
(combined use of a GLP-1 compound and a modulator of  
diabetic late complications)  
IT Kidney, disease  
(diabetic nephropathy; combined use of a GLP-  
1 compound and a modulator of diabetic late complications)  
IT Nerve, disease  
(diabetic neuropathy; combined use of a GLP-1  
compound and a modulator of diabetic late complications)  
IT Eye, disease  
(diabetic retinopathy; combined use of a GLP-1  
compound and a modulator of diabetic late complications)  
IT Gene, animal  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)  
(glp-1; combined use of a GLP-1  
compound and a modulator of diabetic late complications)  
IT Diabetes mellitus  
(non-insulin-dependent; combined use of a GLP-1  
compound and a modulator of diabetic late complications)  
IT Antidiabetic agents  
Drug delivery systems  
(oral; combined use of a GLP-1 compound and a  
modulator of diabetic late complications)  
IT Drug delivery systems  
(parenterals; combined use of a GLP-1 compound and a  
modulator of diabetic late complications)  
IT 496765-91-4  
RL: PAC (Pharmacological activity); PRP (Properties); THU (Therapeutic

use); BIOL (Biological study); USES (Uses)  
(amino acid sequence; combined use of a GLP-1  
compound and a modulator of diabetic late complications)  
IT 525-66-6, Propranolol 13523-86-9, Pindolol 26839-75-8, Timolol  
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76547-98-3, Lisinopril 81147-92-4, Esmolol 83647-97-6, Spirapril  
85441-61-8, Quinapril 86541-75-5, Benazepril 87333-19-5, Ramipril  
87679-37-6, Trandolapril 89371-37-9, Imidapril 89750-14-1D,  
GLP-1, analogs or fragments 98048-97-6, Fosinopril  
107133-36-8, Perindopril erbumine 114798-26-4, Losartan 135038-57-2,  
Alatriopril 136087-85-9, Fidaresat 137862-53-4, Valsartan  
138402-11-6, Irbesartan 141732-76-5, Exendin-4 141732-76-5D,  
Exendin-4, derivs. 169939-94-0, Ly 335331  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
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(combined use of a GLP-1 compound and a modulator of  
diabetic late complications)  
IT 9015-82-1, Angiotensin-converting enzyme 9028-31-3, Aldose reductase  
141436-78-4, Protein kinase C  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)  
(inhibitors; combined use of a GLP-1 compound and a  
modulator of diabetic late complications)  
L34 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2003:320036 CAPLUS <<LOGINID::20070124>>  
DOCUMENT NUMBER: 138:338498  
TITLE: Preparation of human glucagon-like-peptide-1 mimics  
and their use in the treatment of diabetes  
and related conditions  
INVENTOR(S): Natarajan, Sesha I.; Bastos, Margarita M.;  
Bernatowicz, Michael S.; Mapelli, Claudio; Lee, Ving;  
Ewing, William R.  
PATENT ASSIGNEE(S): Bristol-Myers Squibb Company, USA  
SOURCE: PCT Int. Appl., 153 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003033671	A2	20030424	WO 2002-US33386	20021018 <-
WO 2003033671	A3	20051229		
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CA 2463908 A1 20030424 CA 2002-2463908 20021018 <-  
JP 2005514337 T 20050519 JP 2003-536401 20021018  
CN 1630709 A 20050622 CN 2002-820558 20021018  
EP 1572892 A2 20050914 EP 2002-782185 20021018  
R: AT, BE, CH, DE, DK, ES, FR, BG, GR, IT, LI, LU, NL, SE, MC, PT,  
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BR 2002013377 A 20060523 BR 2002-13377 20021018  
NO 2004001203 A 20040610 NO 2004-1203 20040323  
ZA 2004002846 A 20050816 ZA 2004-2846 20040415  
PRIORITY APPLN. INFO.: US 2001-342015P P 20011018  
WO 2002-US33386 W 20021018  
OTHER SOURCE(S): MARPAT 138:338498  
AN 2003:320036 CAPLUS <<LOGINID::20070124>>  
DN 138:338498  
ED Entered STN: 25 Apr 2003  
TI Preparation of human glucagon-like-peptide-1 mimics and their use in the  
treatment of diabetes and related conditions  
IN Natarajan, Sesha I.; Bastos, Margarita M.; Bernatowicz, Michael S.;  
Mapelli, Claudio; Lee, Ving; Ewing, William R.  
PA Bristol-Myers Squibb Company, USA  
SO PCT Int. Appl., 153 pp.  
CODEN: PIXXD2  
DT Patent  
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IC ICM C12N  
CC 34-3 (Amino Acids, Peptides, and Proteins)  
Section cross-reference(s): 1, 63  
FAN.CNT 2  
PATENT NO. KIND DATE APPLICATION NO. DATE  
PI WO 2003033671 A2 20030424 WO 2002-US33386 20021018 <-  
WO 2003033671 A3 20051229  
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ZA 2004002846 A 20050816 ZA 2004-2846 20040415  
PRAI US 2001-342015P P 20011018  
WO 2002-US33386 W 20021018

CLASS  
PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

WO 2003033671 ICM C12N  
IPC1 C12N [ICM,7]  
IPCR A61K0038-00 [LC\*]; A61K0038-00 [LA]; A61K0038-26  
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NO 2004001203 IPC1 C07K0014-605 [ICM,7]; C07K0014-435 [ICM,7,C\*];  
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ZA 2004002846 IPCR A61K0038-00 [N,C\*]; C07K0014-435 [LC\*]; A61K0038-00  
[N,A]; C07K0014-605 [LA]  
ECLA C07K014/605

OS MARPAT 138:338498  
AB The invention provides novel human glucagon-like peptide-1 (GLP-1) peptide mimics A-Xaa1-Xaa2-Xaa3-Xaa4-Xaa5-Xaa6-Xaa7-Xaa8-Xaa9-Y-Z-B [Xaa1-Xaa9 are naturally or non-naturally occurring amino acid residues; Y and Z are amino acid residues which may be substituted; A and B are optionally present; A is H, an amino acid or peptide containing, approx. 1-15 amino acid residues, an R group (H, (cyclo)alkyl, cycloalkylalkyl, heterocyclyl, heterocycloalkyl, (hetero)aryl, arylalkyl, arylalkoxyalkyl, heteroarylalkyl, or heteroalkoxyalkyl), an RCO (amide) group, a carbamate group, a urea, a sulfonamide, or an aminosulfonyl group; B is OH, alkoxy, etc., an amino or amino acid residue, or a peptide containing from 1-15 amino acid residues, terminating at the C-terminus as a carboxamide, ester, carboxyl, or an amino alc.] that mimic the biol. activity of the native GLP-1 peptide and thus are useful for the treatment or

[LA]; C07K0007-00 [LC\*]; C07K0007-06 [LA];  
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JP 2005514337 IPC1 C07K0007-06 [ICM,7]; A61K0038-00 [ICS,7]; A61P0003-04  
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IPCR A61K0038-00 [N,A]; A61K0038-00 [N,C\*]; C07K0014-435  
[LC\*]; C07K0014-605 [LA]  
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4C084/BA08; 4C084/BA17; 4C084/BA23; 4C084/BA32;  
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4C084/ZA012; 4C084/ZA332; 4C084/ZA452; 4C084/ZA702;  
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4C084/ZC352; 4C084/ZC412; 4H045/AA10; 4H045/AA30;  
4H045/BA10; 4H045/BA16; 4H045/BA17; 4H045/BA18;  
4H045/DA37; 4H045/EA20; 4H045/FA10; 4H045/FA20;  
4H045/FA33; 4H045/FA34; 4H045/GA21  
CN 1630709 IPC1 C12N0001-00 [ICM,7]  
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[LC\*]; A61K0038-26 [LA]; A61P0003-00 [LC\*];  
A61P0003-04 [LA]; A61P0003-06 [LA]; A61P0003-10  
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A61P0017-00 [LC\*]; A61P0017-02 [LA]; A61P0025-00  
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A61P0027-02 [LA]; A61P0043-00 [LC\*]; A61P0043-00  
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EP 1572892 IPC1 C12N0001-00 [ICM,7]  
IPCR A61K0038-00 [LC\*]; A61K0038-00 [LA]; A61K0038-08  
[LC\*]; A61K0038-08 [LA]; A61K0038-26 [LC\*];  
A61K0038-26 [LA]; A61P0003-00 [LC\*]; A61P0003-04  
[LA]; A61P0003-06 [LA]; A61P0003-10 [LA];  
A61P0005-00 [LC\*]; A61P0005-50 [LA]; A61P0009-00  
[LC\*]; A61P0009-10 [LA]; A61P0009-12 [LA];  
A61P0013-00 [LC\*]; A61P0013-12 [LA]; A61P0017-00

prevention of diseases or disorders associated with GLP activity. These chemical-modified peptides stimulate insulin secretion in type II diabetics and produce other beneficial insulinotropic responses, while exhibiting increased stability to proteolytic cleavage making them ideal therapeutic candidates for oral or parenteral administration. A method of preparing the polypeptides comprises replacing the message sequence of the polypeptide with a variant message sequence capable of inducing receptor mediated signal transduction. An example is claimed peptide H-AEGTFTSD-Bip(2-Et)-Bip(2-Me)-NH2 (Bip = biphenylalanine residue).  
ST glucagon like peptide mimic prepn treatment diabetes  
IT Antiarteriosclerotics  
(antiatherosclerotics; preparation of human glucagon-like-peptide-1 mimics for use in treatment of diabetes and related conditions)  
IT Kidney, disease  
(diabetic nephropathy; preparation of human glucagon-like-peptide-1 mimics for use in treatment of diabetes and related conditions)  
IT Nerve, disease  
(diabetic neuropathy; preparation of human glucagon-like-peptide-1 mimics for use in treatment of diabetes and related conditions)  
IT Eye, disease  
(diabetic retinopathy; preparation of human glucagon-like-peptide-1 mimics for use in treatment of diabetes and related conditions)  
IT Metabolic disorders  
(metabolic syndrome X; preparation of human glucagon-like-peptide-1 mimics for use in treatment of diabetes and related conditions)  
IT Antidiabetic agents  
Antihypertensives  
Antibesity agents  
Atherosclerosis  
Diabetes mellitus  
Human  
Hyperglycemia  
Hypertension  
Hypertriglyceridemia  
Hypolipemic agents  
Obesity  
Wound healing  
(preparation of human glucagon-like-peptide-1 mimics for use in treatment of diabetes and related conditions)  
IT Hyperlipidemia  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(preparation of human glucagon-like-peptide-1 mimics for use in treatment of diabetes and related conditions)  
IT Peptides, preparation  
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU

(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of human glucagon-like-peptide-1 mimics for use in treatment of diabetes and related conditions)

IT 89750-14-IDP, Glucagon-like peptide 1, mimics 516514-32-2P  
516514-38-8P 516514-43-5P 516514-47-9P 516514-52-6P 516514-55-9P  
516514-58-2P 516514-61-7P 516514-64-0P 516514-68-4P 516514-72-0P  
516514-75-3P 516514-78-6P 516514-81-1P 516514-84-4P 516514-87-7P  
516514-91-3P 516514-95-7P 516514-99-1P 516515-03-0P 516515-06-3P  
516515-09-6P 516515-14-3P 516515-18-7P 516515-22-3P 516515-26-7P  
516515-30-3P 516515-34-7P 516515-38-1P 516515-42-7P 516515-46-1P  
516515-50-7P 516515-55-2P 516515-59-6P 516515-63-2P 516515-68-7P  
516515-72-3P 516515-76-7P 516515-80-3P 516515-84-7P 516515-88-1P  
516515-92-7P 516515-96-1P 516516-01-1P 516516-06-6P 516516-10-2P  
516516-14-6P 516516-18-0P 516516-22-6P 516516-26-0P 516516-31-7P  
516516-35-1P 516516-39-5P 516516-44-2P 516516-50-0P 516516-55-5P  
516516-60-2P 516516-64-6P 516516-68-0P 516516-72-6P 516516-76-0P  
516516-80-6P 516516-85-1P 516516-87-3P 516516-91-9P 516516-95-3P  
516516-98-6P 516517-02-5P 516517-06-9P 516517-10-5P 516517-14-9P  
516517-17-2P 516517-22-9P 516517-26-3P 516517-30-9P 516517-33-2P  
516517-37-6P 516517-41-2P 516517-45-6P 516517-50-3P 516517-54-7P  
516517-59-2P 516517-63-8P 516517-67-2P 516517-71-8P 516517-75-2P  
516517-79-6P 516517-82-1P 516517-85-4P 516517-88-7P 516517-91-2P  
516517-96-7P 516518-00-6P 516518-04-0P 516518-08-4P 516518-11-9P  
516518-15-3P 516518-19-7P 516518-22-2P 516518-26-6P 516518-30-2P  
516518-33-5P 516518-35-7P 516518-39-1P 516518-42-6P 516518-46-0P  
516518-48-2P 516518-51-7P 516518-54-0P 516518-57-3P 516518-59-5P  
516518-61-9P 516518-64-2P 516518-66-4P 516518-69-7P 516518-73-3P  
516518-78-8P 516518-83-5P 516518-88-0P 516518-92-6P 516518-96-0P  
516519-00-9P 516519-04-3P 516519-09-8P 516519-12-3P 516519-15-6P  
516519-18-9P 516519-21-4P 516519-24-7P 516519-27-0P 516519-32-7P  
516519-37-2P 516519-40-7P 516519-45-2P 516519-50-9P 516519-54-3P  
516519-59-8P 516519-63-4P 516519-67-8P 516519-72-5P 516519-77-0P  
516519-82-7P 516519-87-2P 516519-91-8P 516519-95-2P 516519-99-6P  
516520-03-9P 516520-09-5P 516520-13-1P 516520-17-5P 516520-22-2P  
516520-26-6P 516520-29-9P 516520-33-5P 516520-36-8P 516520-39-1P  
516520-42-6P 516520-45-9P 516520-47-1P 516520-49-3P 516520-52-8P  
516520-54-0P 516520-55-1P 516520-57-3P 516520-59-5P 516520-61-9P  
516520-63-1P 516520-66-4P 516520-68-6P 516520-70-0P 516520-72-2P  
516520-74-4P 516520-75-5P 516520-77-7P 516520-79-9P 516520-81-3P  
516520-82-4P 516520-84-6P 516520-86-8P 516520-87-9P 516520-89-1P  
516520-91-5P 516520-93-7P 516520-95-9P 516520-97-1P 516520-99-3P  
516521-01-0P 516521-03-2P 516521-05-4P 516521-07-6P 516521-08-7P  
516521-09-8P 516521-10-1P 516521-12-3P 516521-13-4P 516521-14-5P  
516521-16-7P 516521-18-9P 516521-19-0P 516521-21-4P 516521-22-5P  
516521-23-6P 516521-24-7P 516521-25-8P 516521-26-9P 516521-27-0P

516521-28-1P 516521-29-2P 516521-30-5P 516521-31-6P 516521-32-7P  
516521-33-8P 516521-34-9P 516521-35-0P 516521-36-1P 516521-37-2P  
516521-38-3P 516521-39-4P 516521-40-7P 516521-41-8P 516521-42-9P  
516521-43-0P 516521-44-1P 516521-45-2P 516521-53-2P 516521-54-3P  
516521-55-4P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of human glucagon-like-peptide-1 mimics for use in treatment of diabetes and related conditions)

IT 150-46-9, Triethyl borate 1973-22-4, 1 Bromo 2 ethylbenzene 4326-36-7  
16419-60-6, o Tolyboronic acid 93267-04-0 516521-49-6

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of human glucagon-like-peptide-1 mimics for use in treatment of diabetes and related conditions)

IT 90002-36-1P, 2 Ethylphenylboronic acid 112766-18-4P 516521-46-3P

516521-47-4P 516521-48-5P 516521-50-9P 516521-51-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of human glucagon-like-peptide-1 mimics for use in treatment of diabetes and related conditions)

IT 51-64-9, Dexamphetamine 94-20-2, Chlorpropamide 122-09-8, Phentermine 637-07-0, Clofibrate 657-24-9, Metformin 9004-10-8, Insulin, biological studies 10238-21-8, Glyburide 14838-15-4, Phenylpropanolamine 21187-98-4, Glucalide 22322-71-9, Mazindol 25812-30-0, Gemfibrozil 29094-61-9, Glipizide 49562-28-9, Fenofibrate 56180-94-0, Acarbose 72432-03-2, Miglitol 75330-75-5, Lovastatin 79902-63-9, Simvastatin 81093-37-0, Pravastatin 93479-97-1, Glimepiride 93957-54-1, Fluvastatin 96829-58-2, Orlistat 97240-79-4, Topiramate 97322-87-7, Troglitazone 105816-04-4, Nateglinide 106650-56-0, Sibutramine 111025-46-8, Pioglitazone 122320-73-4, Rosiglitazone 134523-00-5, Atorvastatin 135062-02-1, Repaglinide 141750-63-2, Nisvastatin 141758-74-9, AC 2993 144288-97-1, TS-962 145599-86-6, Cerivastatin 152755-31-2, LY295427 159183-92-3, L750355 161600-01-7, Isaglitazone 166518-60-1, Avasimibe 170861-63-9, JTT-501 176435-10-2, LY315902 178759-95-0, MD 700 196808-45-4 199113-98-9 199914-96-0, YM-440 213252-19-8, KRP297 244081-42-3, AJ9677 258345-41-4, GW-409544 262352-17-0, CP 529414 282526-98-1, ATL-962 287714-41-4 335149-08-1, L895645 335149-14-9, R-119702 335149-15-0, KAD1129 335149-17-2, ARHO39242 335149-23-0, NVPDP-728A 335149-25-2,

2, CP331648 430433-17-3, Gliopyride 444069-80-1, Axokine  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(preparation of human glucagon-like-peptide-1 mimics for use in treatment of diabetes and related conditions)

L34 ANSWER 5 OF 9 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 2003:390202 BIOSIS <<LOGINID::20070124>>

DOCUMENT NUMBER: PREV200300390202

TITLE: The glucagon-like peptides: A double-edged therapeutic sword?

AUTHOR(S): Perry, TracyAnn [Reprint Author]; Greig, Nigel H.

CORPORATE SOURCE: Section of Drug Design and Development, Laboratory of Neurosciences, Gerontology Research Center, National Institute on Aging, National Institutes of Health, 5600 Nathan Shock Drive, Baltimore, MD, 21224, USA  
perryt@grc.nia.nih.gov

SOURCE: Trends in Pharmacological Sciences, (July 2003) Vol. 24, No. 7, pp. 377-383. print.  
ISSN: 0165-6147 (ISSN print).

DOCUMENT TYPE: Article  
General Review; (Literature Review)

LANGUAGE: English

ENTRY DATE: Entered STN: 27 Aug 2003

Last Updated on STN: 27 Aug 2003

AN 2003:390202 BIOSIS <<LOGINID::20070124>>

DN PREV200300390202

TI The glucagon-like peptides: A double-edged therapeutic sword?

AU Perry, TracyAnn [Reprint Author]; Greig, Nigel H.

CS Section of Drug Design and Development, Laboratory of Neurosciences, Gerontology Research Center, National Institute on Aging, National Institutes of Health, 5600 Nathan Shock Drive, Baltimore, MD, 21224, USA  
perryt@grc.nia.nih.gov

SO Trends in Pharmacological Sciences, (July 2003) Vol. 24, No. 7, pp. 377-383. print.

ISSN: 0165-6147 (ISSN print).

DT Article  
General Review; (Literature Review)

LA English

ED Entered STN: 27 Aug 2003

Last Updated on STN: 27 Aug 2003

AB Glucagon-like peptide-1(7-36)-amide (GLP-1) is an endogenous peptide that is secreted from the gut in response to the presence of food. Recent studies have established that GLP-1 and its longer-acting analog exendin-4 have multiple synergistic effects on glucose-dependent, insulin secretion pathways of the pancreatic beta-cell and on plasticity in neuronal cells. Recent interest has focused on the development of these peptides as a novel therapeutic strategy for non-insulin-dependent (type 2) diabetes mellitus and associated neuropathy. This is with a view to developing lead compounds, based on neurotrophic action, for central and peripheral

degenerative disorders such as stroke and Alzheimer's disease in addition to the peripheral neuropathy associated with type 2 diabetes mellitus. Here, we address recent advances in the biological action of GLP-1 and its related analogs.

CC Cytology - Animal 02506  
Biochemistry studies - Proteins, peptides and amino acids 10064  
Biochemistry studies - Carbohydrates 10068  
Pathology - Therapy 12512  
Metabolism - Metabolic disorders 13020  
Cardiovascular system - Blood vessel pathology 14508  
Endocrine - General 17002  
Endocrine - Pancreas 17008  
Endocrine - Neuroendocrinology 17020  
Nervous system - Physiology and biochemistry 20504  
Nervous system - Pathology 20506  
Pharmacology - General 22002  
IT Major Concepts  
Endocrine System (Chemical Coordination and Homeostasis); Nervous System (Neural Coordination); Pharmacology  
IT Parts, Structures, & Systems of Organisms  
beta cells: endocrine system; neuronal cells: nervous system  
IT Diseases  
Alzheimer's disease: behavioral and mental disorders, nervous system disease  
Alzheimer Disease (MeSH)  
IT Diseases  
diabetic neuropathy: endocrine disease/pancreas, metabolic disease, nervous system disease  
Diabetic Nephropathies (MeSH)  
IT Diseases  
stroke: nervous system disease, vascular disease  
Cerebrovascular Disorders (MeSH)  
IT Diseases  
type 2 diabetes mellitus: endocrine disease/pancreas, metabolic disease  
Diabetes Mellitus, Non-Insulin-Dependent (MeSH)  
IT Chemicals & Biochemicals  
glucagon-like peptide-1(7-36)-amide; glucose; insulin  
IT Miscellaneous Descriptors  
drug development  
RN 118549-37-4 (glucagon-like peptide-1(7-36)-amide)  
50-99-7Q (glucose)  
58367-01-4Q (glucose)  
9004-10-8 (insulin)

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DUPLICATE 1

ACCESSION NUMBER: 2001:506591 BIOSIS <<LOGINID::20070124>>

DOCUMENT NUMBER: PREV200100506591

TITLE: Urinary excretion of glucagon-like peptide 1 (GLP

-1) 7-36 amide in human type 2 (non-insulin-dependent) diabetes mellitus.

AUTHOR(S): Lugari, R. [Reprint author]; Ugolotti, D.; Dei Cas, A.; Barilli, A. L.; Iotti, M.; Marani, B.; Orlandini, A.; Gnudi, A.; Zandomeneghi, R.

CORPORATE SOURCE: Cattedra di Endocrinologia, Via Gramsci 14, 43100, Parma, Italy

endoparm@ipr.univ.cce.unipr.it

SOURCE: Hormone and Metabolic Research, (September, 2001)

Vol. 33, No. 9, pp. 568-571. print.

CODEN: HMMRA2. ISSN: 0018-5043.

DOCUMENT TYPE: Article

LANGUAGE: English

ENTRY DATE: Entered STN: 31 Oct 2001

Last Updated on STN: 23 Feb 2002

AN 2001:506591 BIOSIS <<LOGINID::20070124>>

DN PREV200100506591

TI Urinary excretion of glucagon-like peptide 1 (GLP-1)

7-36 amide in human type 2 (non-insulin-dependent) diabetes mellitus.

AU Lugari, R. [Reprint author]; Ugolotti, D.; Dei Cas, A.; Barilli, A. L.; Iotti, M.; Marani, B.; Orlandini, A.; Gnudi, A.; Zandomeneghi, R.

CS Cattedra di Endocrinologia, Via Gramsci 14, 43100, Parma, Italy

endoparm@ipr.univ.cce.unipr.it

SO Hormone and Metabolic Research, (September, 2001) Vol. 33, No.

9, pp. 568-571. print.

CODEN: HMMRA2. ISSN: 0018-5043.

DT Article

LA English

ED Entered STN: 31 Oct 2001

Last Updated on STN: 23 Feb 2002

AB The urinary excretion of insulinotropic glucagon-like peptide 1 (GLP-1) was investigated as an indicator of renal tubular integrity in 10 healthy subjects and in 3 groups of type 2 diabetic patients with different degrees of urinary albumin excretion rate. No significant difference emerged between the groups with respect to age of the patients, known duration of diabetes, metabolic control, BMI, or residual beta-cell pancreatic function. Endogenous creatinine clearance was significantly reduced under conditions of overt diabetic nephropathy, compared with normo and microalbuminuric patients

( $p < 0.01$ ). Urinary excretion of GLP-1 was

significantly higher in normoalbuminuric patients compared to controls ( $490.4 \pm 211.5$  vs.  $275.5 \pm 132.1$  pg/min;  $p < 0.05$ ), with further increase under incipient diabetic nephropathy conditions ( $648.6 \pm 305$  pg/min;  $p < 0.01$ ). No significant difference resulted, in contrast, between

macroproteinuric patients and non-diabetic subjects. Taking all patients examined into account, a significant positive relationship emerged between urinary GLP-1 and creatinine clearance ( $p = 0.004$ ). In

conclusion, an early tubular impairment in type 2 diabetes would occur before the onset of glomerular permeability alterations. The tubular dysfunction seems to evolve with the development of persistent microalbuminuria. Finally, the advanced tubular involvement, in terms of urinary GLP-1 excretion, under overt diabetic nephropathy conditions would be masked by severe concomitant glomerular damage with the coexistence of both alterations resulting in a peptide excretion similar to control subjects.

CC Biochemistry studies - Proteins, peptides and amino acids 10064

Metabolism - Metabolic disorders 13020

Urinary system - Pathology 15506

Endocrine - General 17002

Endocrine - Pancreas 17008

IT Major Concepts

Clinical Endocrinology (Human Medicine, Medical Sciences); Nephrology (Human Medicine, Medical Sciences)

IT Diseases

diabetic nephropathy; endocrine disease/pancreas, metabolic disease, urologic disease

Diabetic Nephropathies (MeSH)

IT Diseases

type 2 diabetes mellitus; endocrine disease/pancreas, metabolic disease, non-insulin-dependent diabetes mellitus

Diabetes Mellitus, Non-Insulin-Dependent (MeSH)

IT Chemicals & Biochemicals

creatinine; glucagon-like peptide 1: renal tubular integrity indicator; glucagon-like peptide 1 7-36 amide [GLP-1 7-36

amide]; urinary excretion

IT Miscellaneous Descriptors

glomerular permeability

ORGN Classifier

Hominidae 86215

Super Taxa

Primates; Mammalia; Vertebrata; Chordata; Animalia

Organism Name

human: patient

Taxa Notes

. Animals, Chordates, Humans, Mammals, Primates, Vertebrates

RN 60-27-5 (creatinine)

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ACCESSION NUMBER: 96034762 EMBASE <<LOGINID::20070124>>

DOCUMENT NUMBER: 1996034762

TITLE: Gastric emptying, glucose responses, and insulin secretion after a liquid test meal: Effects of exogenous glucagon-like peptide-1 (GLP-1)-(7-36) amide in type 2 (noninsulin-dependent) diabetic patients.

AUTHOR: Willms B.; Werner J.; Holst J.J.; Orskov C.; Creutzfeldt W.; Nauck M.A.

CORPORATE SOURCE: Department of Medicine, Ruhr-University Bochum, Knappschafts-Krankenhaus, In der Schornau 23-25, 44892 Bochum, Germany

SOURCE: Journal of Clinical Endocrinology and Metabolism, (

1996) Vol. 81, No. 1, pp. 327-332.

ISSN: 0021-972X CODEN: JCEMAZ

COUNTRY: United States

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 003 Endocrinology

037 Drug Literature Index

LANGUAGE: English

SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 20 Feb 1996

Last Updated on STN: 20 Feb 1996

AN 96034762 EMBASE <<LOGINID::20070124>>

DN 1996034762

TI Gastric emptying, glucose responses, and insulin secretion after a liquid test meal: Effects of exogenous glucagon-like peptide-1 (GLP-1)-(7-36) amide in type 2 (noninsulin-dependent) diabetic patients.

AU Willms B.; Werner J.; Holst J.J.; Orskov C.; Creutzfeldt W.; Nauck M.A.

CS Department of Medicine, Ruhr-University Bochum, Knappschafts-Krankenhaus, In der Schornau 23-25, 44892 Bochum, Germany

SO Journal of Clinical Endocrinology and Metabolism, (1996) Vol.

81, No. 1, pp. 327-332.

ISSN: 0021-972X CODEN: JCEMAZ

CY United States

DT Journal; Article

FS 003 Endocrinology

037 Drug Literature Index

LA English

SL English

ED Entered STN: 20 Feb 1996

Last Updated on STN: 20 Feb 1996

AB The aim of the study was to investigate whether inhibition of gastric

emptying of meals plays a role in the mechanism of the blood glucose-lowering action of glucagon-like peptide-1-(7-36) amide [GLP-1-(7-36) amide] in type 2 diabetes. Eight poorly controlled type 2 diabetic patients (age,  $58 \pm 6$  yr; body mass index,  $30.0 \pm 5.2$  kg/m<sup>2</sup>; hemoglobin A(1c),  $10.5 \pm 1.2\%$ ) were studied in the fasting state (plasma glucose,  $11.1 \pm 1.1$  mmol/L). A liquid meal of 400 mL containing 8% amino acids and 50 g sucrose (327 Kcal) was administered at time zero by a nasogastric tube. Gastric volume was determined by a dye dilution technique using phenol red. In randomized order, GLP-1-(7-36) amide ( $1.2$  pmol/kg  $\cdot$  min; Saxon Biochemicals) or placebo (0.9% NaCl with 1% human serum albumin) was infused between -30 and 240 min. In the control experiment, gastric emptying was completed within 120 min, and plasma glucose, insulin, C-peptide, GLP-1-(7-36) amide, and glucagon concentrations transiently increased. With exogenous GLP-1-(7-36) amide (plasma level, approx. 70 pmol/L), gastric volume remained constant over the period it was measured (120 min;  $P < 0.0001$  vs. placebo), and plasma glucose fell to normal fasting values ( $5.4 \pm 0.7$  mmol/L) within 3-4 h, whereas insulin was stimulated in most, but not all, patients, and glucagon remained at the basal level or was slightly suppressed. In conclusion, GLP-1-(7-36) amide inhibits gastric emptying in type 2 diabetic patients. Together with the stimulation of insulin and the inhibition of glucagon secretion, this effect probably contributes to the blood glucose-lowering action of GLP-1-(7-36) amide in type 2-diabetic patients when studied after meal ingestion. At the degree observed, inhibition of gastric emptying, however, must be overcome by tachyphylaxis, reduction in dose, or pharmacological interventions so as not to interfere with the therapeutic use of GLP-1-(7-36) amide in type 2 diabetic patients.

CT Medical Descriptors:

\*insulin release

\*non insulin dependent diabetes mellitus: DT, drug therapy

\*non insulin dependent diabetes mellitus: TH, therapy

\*stomach emptying

adult

aged

article

clinical article

clinical trial

controlled study

diabetic angiopathy: CO, complication

diabetic diet

diabetic nephropathy: CO, complication

diabetic neuropathy: CO, complication

diabetic retinopathy

drug effect  
drug mechanism  
female  
glucagon release  
glucose blood level  
hormone inhibition  
human

hypertension: DT, drug therapy  
intravenous drug administration  
male  
postprandial state  
priority journal  
randomized controlled trial  
Drug Descriptors:

\*glucagon like peptide 1 [7-36] amide: CM, drug comparison  
\*glucagon like peptide 1 [7-36] amide: DT, drug therapy  
\*glucagon like peptide 1 [7-36] amide: PD, pharmacology  
\*glucagon like peptide 1 [7-36] amide: CT, clinical trial  
\*glucose: EC, endogenous compound  
\*insulin: EC, endogenous compound  
acarbose: DT, drug therapy  
captopril plus hydrochlorothiazide: DT, drug therapy  
glibenclamide: DT, drug therapy  
isosorbide dinitrate: DT, drug therapy  
metformin: DT, drug therapy  
metoprolol: DT, drug therapy  
nifedipine: DT, drug therapy  
placebo: CM, drug comparison

RN (glucagon like peptide 1 [7-36] amide) 119637-73-9; (glucose) 50-99-7,  
84778-64-3; (insulin) 9004-10-8; (acarbose) 56180-94-0; (glibenclamide)  
10238-21-8; (isosorbide dinitrate) 87-33-2; (metformin) 1115-70-4,  
657-24-9; (metoprolol) 37350-58-6; (nifedipine) 21829-25-4  
CO Saxon (Germany)

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ACCESSION NUMBER: 93286381 EMBASE <<LOGINID::20070124>>  
DOCUMENT NUMBER: 1993286381

TITLE: Preserved incretin effect in type 1 diabetic patients with end-stage nephropathy treated by combined heterotopic pancreas and kidney transplantation.

AUTHOR: Nauck M.A.; Busing M.; Orskov C.; Siegel E.G.; Talartschik J.; Baartz A.; Baartz T.; Hopt U.T.; Becker H.-D.; Creutzfeldt W.

CORPORATE SOURCE: Div. of Gastroenterol./Endocrinology, Department of Medicine, Georg August University, Robert-Koch-Strasse

(incretin effect). Insulin responses after the oral glucose challenge were similar in the two patient groups despite systemic venous drainage of the pancreas graft in the pancreas-kidney-transplanted group. In both groups GIP and GLP-1 increased after oral but not after intravenous glucose, and B cell secretory responses were significantly smaller (by  $55.2 \pm 7.7\%$  and  $46.5 \pm 12.5\%$ , respectively) with 'isoglycaemic' intravenous glucose infusions. The lack of reduction in the incretin effect in pancreas-kidney-transplanted patients, whose functioning pancreas is denervated, indicates a lesser role for the nervous system and a more important contribution of circulating incretin hormones in mediating the enteroinsular axis in man.

CT Medical Descriptors:

\*diabetic nephropathy: SU, surgery  
\*insulin dependent diabetes mellitus  
\*kidney transplantation  
\*pancreas transplantation

adult  
article  
clinical article  
controlled study  
female  
human  
male

Drug Descriptors:

\*gastric inhibitory polypeptide: EC, endogenous compound  
\*glucagon like peptide 1: EC, endogenous compound  
\*glucose  
\*insulin: EC, endogenous compound

RN (gastric inhibitory polypeptide) 59392-49-3; (glucagon like peptide 1) 89750-14-1; (glucose) 50-99-7, 84778-64-3; (insulin) 9004-10-8

L34 ANSWER 9 OF 9 MEDLINE on STN

ACCESSION NUMBER: 92288534 MEDLINE <<LOGINID::20070124>>  
DOCUMENT NUMBER: PubMed ID: 1600330

TITLE: Basal and nutrient-stimulated pancreatic and gastrointestinal hormone concentrations in type-1-diabetic patients after successful combined pancreas and kidney transplantation.

AUTHOR: Nauck M A; Busing M; Orskov C; Siegel E G; Talartschik J; Baartz A; Baartz T; Holzer H; Hopt U T; Ebert R; +

CORPORATE SOURCE: Abteilung Gastroenterologie und Endokrinologie, Georg-August-Universitat, Gottingen.

SOURCE: The Clinical investigator, (1992 Jan) Vol. 70, No. 1, pp. 40-8.

Journal code: 9207154. ISSN: 0941-0198.

PUB. COUNTRY: GERMANY: Germany, Federal Republic of

40,W-3400 Gottingen, Germany

SOURCE: Acta Diabetologica, (1993) Vol. 30, No. 1, pp. 39-45.

ISSN: 0940-5429 CODEN: ACDAEZ

COUNTRY: Germany

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 003 Endocrinology

006 Internal Medicine

029 Clinical Biochemistry

LANGUAGE: English

SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 31 Oct 1993

Last Updated on STN: 31 Oct 1993

AN 93286381 EMBASE <<LOGINID::20070124>>

DN 1993286381

TI Preserved incretin effect in type 1 diabetic patients with end-stage nephropathy treated by combined heterotopic pancreas and kidney transplantation.

AU Nauck M.A.; Busing M.; Orskov C.; Siegel E.G.; Talartschik J.; Baartz A.; Baartz T.; Hopt U.T.; Becker H.-D.; Creutzfeldt W.

CS Div. of Gastroenterol./Endocrinology, Department of Medicine, Georg August University, Robert-Koch-Strasse 40,W-3400 Gottingen, Germany

SO Acta Diabetologica, (1993) Vol. 30, No. 1, pp. 39-45.

ISSN: 0940-5429 CODEN: ACDAEZ

CY Germany

DT Journal; Article

FS 003 Endocrinology

006 Internal Medicine

029 Clinical Biochemistry

LA English

SL English

ED Entered STN: 31 Oct 1993

Last Updated on STN: 31 Oct 1993

AB Insulin secretion is stimulated better by oral than by intravenous glucose (incretin effect). The contribution of the autonomic nervous system to the incretin effect after oral glucose in humans is unclear. We therefore examined nine type 1 diabetic (insulin-dependent) patients with end-stage nephropathy, studied after combined heterotopic pancreas and kidney transplantation, and 7 non-diabetic kidney recipients (matched for creatinine clearance and immunosuppressive medication). The release of gastric inhibitory polypeptide (GIP) and glucagon-like peptide 1 (GLP-1) immunoreactivity and B cell secretory responses (IR insulin and C-peptide) to oral (50 g) and 'isoglycaemic' intravenous glucose (identical glycaemic profile) were measured by radioimmunoassay. The difference in B cell responses between the two tests represents the contribution of the enteroinsular axis to the response after oral glucose

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 199207

ENTRY DATE: Entered STN: 24 Jul 1992

Last Updated on STN: 24 Jul 1992

Entered Medline: 13 Jul 1992

AN 92288534 MEDLINE <<LOGINID::20070124>>

DN PubMed ID: 1600330

TI Basal and nutrient-stimulated pancreatic and gastrointestinal hormone concentrations in type-1-diabetic patients after successful combined pancreas and kidney transplantation.

AU Nauck M A; Busing M; Orskov C; Siegel E G; Talartschik J; Baartz A; Baartz T; Holzer H; Hopt U T; Ebert R; +

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SO The Clinical investigator, (1992 Jan) Vol. 70, No. 1, pp. 40-8.

Journal code: 9207154. ISSN: 0941-0198.

CY GERMANY: Germany, Federal Republic of

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199207

ED Entered STN: 24 Jul 1992

Last Updated on STN: 24 Jul 1992

Entered Medline: 13 Jul 1992

AB The secretion of pancreatic and gastrointestinal hormones in the basal state and after nutrient stimuli (50 g glucose, 50 g protein, or 30 g triglyceride administered on separate occasions) was assessed in ten previously type-1-diabetic patients after successful combined kidney and pancreas transplantation (systemic venous drainage). Fasting values were compared to matched non-diabetic kidney-transplanted patients and related to kidney function (endogenous creatinine clearance) and to the type and dosage of immunosuppressive medication. In the fasting state, only IR insulin concentrations were higher in pancreas-kidney-transplanted patients (by 88%;  $P = 0.001$ ) than in the kidney graft recipients. There were significant inverse correlations of plasma C-peptide, GIP, and gastrin immunoreactivity to endogenous creatinine clearance (kidney function). In response to nutrients, insulin secretion (IR insulin, C-peptide) was significantly stimulated by glucose, and - to a lesser degree - also by protein. Pancreatic glucagon was suppressed by glucose and stimulated by protein ingestion. GIP was raised after glucose and triglyceride more than after protein ( $P = 0.0003$ ). GLP-1 immunoreactivity was stimulated by all nutrients, with a tendency towards higher responses to protein and fat ( $P = 0.06$ ). Gastrin was mainly raised by protein. In conclusion, the overall pattern of



pancreatic and gastrointestinal hormone release is normal in patients after combined pancreas-kidney-transplantation, but there are some peculiarities due to (a) systemic venous drainage of the pancreas graft (elevated fasting IR insulin) and (b) impaired kidney function (negative correlation of fasting plasma values to endogenous creatinine clearance for C-peptide, GIP, and gastrin).(ABSTRACT TRUNCATED AT 250 WORDS)

CT Check Tags: Female; Male

Adult

Blood Glucose: ME, metabolism

Diabetes Mellitus, Type 1: BL, blood

\*Diabetes Mellitus, Type 1: SU, surgery

Diabetic Nephropathies: BL, blood

\*Diabetic Nephropathies: SU, surgery

\*Gastrointestinal Hormones: BL, blood

Humans

Kidney Function Tests

\*Kidney Transplantation: PH, physiology

Middle Aged

\*Pancreas Transplantation: PH, physiology

Pancreatic Function Tests

\*Pancreatic Hormones: BL, blood

Research Support, Non-U.S. Gov't

CN 0 (Blood Glucose); 0 (Gastrointestinal Hormones); 0 (Pancreatic Hormones)